

N O T I C E

NO HAND CARRIED BIDS! NO MAILED BIDS!

Current security requirements established by the U.S. Capitol Police to screen mail being delivered to the U.S. Capitol Complex of buildings preclude the use of U.S. Postal Service by offerors to deliver their proposals submitted in response to this solicitation. In addition, because all packages must be screened for security purposes at a central location prior to their delivery, the Architect of the Capitol cannot accept packages containing offers handcarried directly to the Bid Room address within the Ford House Office Building, as specified elsewhere in this solicitation, or at any other location in the U.S. Capitol Complex of buildings.

Due to these unusual circumstances the Procurement Division for the Architect of the Capitol will only accept offers/proposals via UPS or FEDEX. See provision AOC52.215-1 Instructions to Offerors located in Section L for solicitations for services/supplies or the Solicitation Conditions for solicitations for construction. All handcarried offers/proposals will be rejected. Any attempt to handcarry an offer/proposal to any location in the U.S. Capitol Complex of buildings will be refused. Offerors are advised when sending proposals via FEDEX or UPS ***not*** to use same day delivery. FEDEX/UPS often subcontract out the delivery for same-day service. It is necessary for delivery personnel to arrive in a FEDEX/UPS truck and be in a uniform recognized as FEDEX/UPS. Offerors are encouraged to determine who will be making the delivery when making arrangements with FEDEX/UPS.

Fax your request for Maps to Attn: Mrs Shola Matthews-Aroloye @ Fax No. 866-221-4163.

NOTICE TO CONTRACTORS

The Architect of the Capitol anticipates that in 2006 the agency's contractors will have to register with the Central Contractor Registration (CCR) database. This is the primary vendor database for the U.S. Federal Government and the CCR collects, validates, stores, and disseminates data in support of agency acquisition missions.

Registration in the CCR will become mandatory in order to be awarded contracts by the Federal Government. Vendors are required to complete a one-time registration to provide basic information relevant to procurement and financial transactions. Vendors must update or renew their registration at least once per year to maintain an active status.

CCR validates the vendor information and electronically shares the secure and encrypted data with the federal agencies finance offices to facilitate paperless payments through electronic funds transfer (EFT).

The AOC is now encouraging all vendors to register with the CCR if they are not already registered. Vendors can register on line at <http://www.ccr.gov>. This internet site contains all pertinent information for registration as well as provides contact points for help when registering.



**RFP NO. 060113: FIRE ALARM SYSTEM
UPGRADE FOR THE U.S. BOTANIC
GARDEN AT D.C. VILLAGE,
WASHINGTON D.C.**

May 31, 2006

Architect of the Capitol
United States Capitol
Washington, D.C. - 20515

PROJECT MANUAL

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ISSUED BY: ARCHITECT OF THE CAPITOL

**RFP NO. 060113
FIRE ALARM SYSTEM UPGRADE FOR
THE U.S. BOTANIC GARDEN AT D. C. VILLAGE,
WASHINGTON D.C.**

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VOLUME I

BUSINESS

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i> January 2004	1. SOLICITATION NO.	2. TYPE OF SOLICITATION	3. DATE ISSUED	PAGE OF PAGES	
	RFP NO. 060113	----- SEALED BID (<i>IFB</i>) <u>XX</u> NEGOTIATED (<i>RFP</i>)	May 31 2006	1	2

IMPORTANT - The "offer" section on page 2 of 2 must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION NO. BG060237	6. PROJECT NO. 000235
7. ISSUED BY CODE _____ ARCHITECT OF THE CAPITOL United States Capitol Washington, D.C. 20515		8. ADDRESS OFFER TO (NOTE - All hand carried bids will be rejected) Architect of the Capitol Procurement Division Ford House Office Building Attn: Mrs Shola Matthews-Aroloye Room H2-263 Bid Room Second and "D" Streets, S.W. Washington, DC 20515
9. FOR INFORMATION CALL:	A. NAME SHOLA MATTHEWS-AROLOYE	B. TELEPHONE NO. (<i>Include area code</i>) (<i>NO COLLECT CALLS</i>) (202) 226-0641

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SUBJECT: **FIRE ALARM SYSTEM UPGRADE FOR U.S. BOTANICAL GARDENS AT D.C. VILLAGE WASHINGTON, D.C.**

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (*Title, identifying no., date*):

1. **A SITE VISIT AND PRE-PROPOSAL CONFERENCE WILL BE HELD ON THURSDAY, JUNE 8, 2006 @ 10:00 A. M. LOCAL TIME. SEE THE ARTICLE ENTITLED "VISIT TO THE SITE OF THE WORK - CONSTRUCTION" OF THE SOLICITATION CONDITIONS FOR DETAILS.**
2. **Davis Bacon Wage Determination DC030003, Modification No. 37, dated 05 May 2006 applies.**
3. **The Offeror's attention is directed to the "SUPPLEMENTARY CONDITIONS", 2. SUBMITTALS, which will be strictly enforced.**

11. The CONTRACTOR shall complete performance within **90 calendar days** after Notice of Award.

12. The CONTRACTOR must furnish any required performance, payment bonds and insurance: XX YES ___ NO. If YES, within 10 calendar days after award.

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 1 copy to perform the work required are due at the place specified in Item 8 by **1:00 p.m** local time **JUNE 30, 2006**. If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee XX is, ___ is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 Calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

OFFER (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)

DUNS NO. _____ TIN _____

15. TELEPHONE & FACSIMILE NOS. (Include area codes)

16. REMITTANCE ADDRESS (Include only if different than Item 14)

17. The offeror agrees to perform the work required at the prices specified in the Schedule in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within 60 calendar days after the date offers are due.

18. The Offeror agrees to furnish any required performance, payment bonds and insurance.

19. ACKNOWLEDGMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.										
DATE										
20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)				20B. SIGNATURE					20C. OFFER DATE	

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT

23. ACCOUNTING AND APPROPRIATION

24. SUBMIT INVOICES TO ADDRESS SHOWN IN ITEM 27

(In Triplicate)

25. AUTHORITY FOR NEGOTIATION, IF APPLICABLE

26. ADMINISTERED BY:

CODE _____

See Block 8

27. PAYMENT WILL BE MADE BY:

ARCHITECT OF THE CAPITOL
Ford House Office Building
Accounting Office, Room H2-205
Washington, D.C. 20024

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

____ 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in the contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, requirements, certifications, and specifications or incorporated by reference in or attached to this contract.

____ 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN
(Type or print)

31A. NAME OF CONTRACTING OFFICER (Type or print)

30B. SIGNATURE

30C. DATE

31B. UNITED STATES OF AMERICA

31C. AWARD DATE

BY:

THE SCHEDULE

SUPPLIES OR SERVICES AND PRICES/COSTS FOR CONSTRUCTION

The Contractor shall furnish all supplies, equipment, personnel and services necessary for the Fire Alarm System upgrade. Two options are included in this project for upgrade of fire alarm system for the U.S. Botanic Gardens' D.C. Village, Washington, D.C. (see the SPECIFICATIONS AND THE CONTRACT DRAWINGS) as required by the Architect of the Capitol.

1. SCHEDULE OF ITEMS

ITEM	DESCRIPTION	QTY.	U/M	PRICE
BASE WORK:				
001	Complete Replacement of Fire Alarm System in the Headhouse & Greenhouse of Botanic Garden D.C. Village.	1	JOB	\$ _____
002	Demolition of all Existing Fire Alarm Systems	1	JOB	\$ _____
003	Restoration of all Surfaces Existing Fire Alarm and Building Equipment Impacted by the Demolition of the Existing Fire Alarm System.	1	JOB	\$ _____
OPTIONS:				
004	<u>Option No. 01:</u> Provide Complete Linear Heat Detection in the Greenhouse.	1	JOB	\$ _____
005	<u>Option No. 02:</u> Provide Complete Voice System Intelligibility throughout the Entire Complex.	1	JOB	\$ _____

**LUMP-SUM PRICE FOR ITEM NOS. 001,
through 005:**

\$ _____

A Site Visit Is Strongly Recommended for Field Verification of Measurements. (see Article 3 entitled “Visit to the Site of the Work” in the Solicitation Conditions.)

2. EXERCISE OF OPTIONS

(a) Item Nos.004 through 005 will be evaluated in accordance the article entitled, “Evaluation of Options” in the Solicitation Conditions. The Government may exercise the options no later than September 30, 2006.

(b) All work is required to be completed within the completion date(s) specified in the article entitled “CONTRACT TIME” in the SUPPLEMENTARY CONDITIONS. In addition the exercise of these options may require a change to the Contractor’s Schedule.

(c) Options will be awarded according to funds availability.

END OF SCHEDULE

GENERAL CONDITIONS

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GENERAL CONDITIONS

AOC52.202-2 DEFINITIONS - CONSTRUCTION (JUN 2004)

- (a) The term “Government” means the United States of America, represented by the Architect of the Capitol, who is the Contracting Officer.
- (b) The term “head of the agency” means the Committee, Commission, or other authority of the Legislative Branch of the Government having final jurisdiction or supervision over the work involved. The “other authority” as used in this paragraph includes the Architect of the Capitol in cases in which he has final jurisdiction or supervision over the work involved.
- (c) The term “Architect” as used in the contract documents shall mean the Architect of the Capitol.
- (d) The term “Contracting Officer” as used in the contract documents means the Architect of the Capitol or his duly authorized representative.
- (e) The term “his duly authorized representative” means any person or persons or board authorized to act for the head of the agency within the scope of their authority.
- (f) The term “Contractor” means the individual, partnership or corporation entering into a contract with the Government to perform the work specified.
- (g) The term “Subcontractor”, as used in this part, means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime contractor or other subcontractor. There is no privity of contract between the Government and the Subcontractors.
- (h) The term “Project Director” means the individual designated by the Architect to monitor the progress of work from a technical standpoint. The duties and responsibilities of the Project Director shall include supervision of scheduling, receipt and verification of Contractor’s payrolls in accordance with the Davis Bacon Act, coordination between Divisions, concerning resolution and/or avoidance of potential problems and, to the extent authorized by the Delegation of Authority, if any, issuance of clarifications, supplemental agreements and change orders to the Contractor.
- (i) The term “contract documents” includes, collectively, the Project Manual, the contract drawings and the addenda and modifications thereto, if any.
- (j) The term “work” includes, but is not limited to, materials, labor, and manufacture and fabrication of components.
- (k) The term “specifications” means the portion of the Contract Documents that consist of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

(l) The term “drawings” means the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, that show the design, location and dimensions of the Work, and generally includes plans, elevations, sections, details, schedules and diagrams.

(m) Wherever in the specifications or upon the drawings the word “directed,” “required,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the “direction,” “requirement,” “order,” “designation,” or “prescription,” of the Contracting Officer is intended and similarly the words “approved,” “acceptable,” “satisfactory,” or words of like import shall mean “approved by” or “acceptable to,” or “satisfactory to” the Contracting Officer, unless otherwise expressly stated.

(n) Where “as shown,” “as indicated,” “as detailed,” or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word “provided” as used herein shall be understood to mean “provide complete in place,” that is “furnished and installed.”

(End of clause)

AOC52.203-1 ADVERTISING/PROMOTIONAL MATERIALS (JUN 2004)

(a) It is the policy of the Congress to discourage contractors providing services and supplies to the Legislative Branch entities, including the Architect of the Capitol, from advertising practices that feature the Capitol and Capitol Complex in a manner in which conveys, or is reasonably calculated to convey, a false impression of sponsorship, approval or endorsement of any product or service by the Congress, the Government of the United States, or any Department, Agency or instrumentality thereof.

(b) Contractors performing construction services for Legislative Branch entities, including the Architect of the Capitol, are discouraged from capitalizing on their contractual relationships with such entities and shall not engage in advertising practices which convey, or are reasonably calculated to convey, a false impression of sponsorship, approval or endorsement of any product or service by the Congress, the Government of the United States, of any Department, Agency or instrumentality thereof. This includes utilizing, in conjunction with the fact of their contractual relationship, images of the Capitol, any other buildings in the Capitol Complex, or any part of the United States Capitol Grounds in their advertising or promotional materials; and/or publishing or disseminating the aforementioned advertising or promotional materials.

(c) The Contractor, by signing this contract, agrees to comply with the foregoing and to submit any proposed advertising or promotional copy connected in any manner with this contract and/or the Capitol, other Capitol Complex Buildings, or the United States Capitol Grounds to the Contracting Officer for approval prior to publication.

(End of clause)

AOC52.203-2 DISCLOSURE OF INFORMATION TO THE GENERAL PUBLIC (JUN 2004)

(a) Promptly after receiving any request from the general public for information on or data derived from this contract, the contractor shall notify the Architect of the Capitol, Procurement Division. The contractor shall cooperate with the Procurement Division in compiling or collecting information or data if the Architect of the Capitol determines the information or data to be releasable.

(b) “General public”, for purposes of this clause, are those groups or individuals who are not authorized by law or regulation to have access.

(c) This clause is not intended to prevent the contractor from providing contract information or data which the contractor is required to provide in order to conduct its business, such as insurance, banking, subcontracting.

(d) The contractor is permitted to request that proprietary information or data not be released if such release would harm or impair the contractor in conducting its normal business. Such request must be documented with clear and specific grounds for that claim.

(End of clause)

AOC52.204-1 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (JUN 2004)

The Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied doubled-sided on recycled paper and meet minimum content standards when not using electronic commerce methods to submit information or data to the Government.

(End of clause)

AOC52.211-3 DEFICIENCIES IN CONTRACT DOCUMENTS (JUN 2004)

The Contractor shall promptly inform the Contracting Officer, in writing, of any discovered errors, omissions, discrepancies, conflicts or ambiguities in the contract documents before proceeding with any work affected by such factors. Failure to do so will be at the risk of the Contractor.

(End of clause)

AOC52.211-6 NOTICE TO PROCEED (JUN 2004)

A formal notice, or notices, to proceed will be issued as soon as practical, normally after approval by the Contracting Officer of the bonds and insurance. Unless specifically authorized in writing, any steps taken in connection with the performance of, or the preparation to perform, the contract, prior to issuance of the notice to proceed, will be the responsibility of and at the risk of the Contractor, and without any cost whatsoever to the Government.

(End of clause)

(a) The Contractor agrees that the Architect of the Capitol or any duly authorized representatives shall, until the expiration of 3 years after final payment under this contract, have access to and the right to examine any books, accounting procedures and practices documents, papers, records and other data regardless of whether such items are in written form, in the form of computer data or in any other form and other supporting evidence, involving transactions related to this contract or compliance with any clause or certification thereunder.

(b) The Contractor further agrees to include in all its subcontracts hereunder a provision to the effect that subcontractor agrees that the Architect of the Capitol or any authorized representatives shall, until the expiration of 3 years after final payment under the subcontract, have access to and the right to examine books, documents, papers, records other data regardless of whether such items are in written form, in the form of computer data or in any other form, and other supporting evidence, involving transactions related to the subcontract or compliance with any clause or certification thereunder.

(c) The term "subcontract" as used in this clause excludes purchase orders not exceeding \$10,000.
(End of clause)

(a) If the price of this contract is changed through the operation of any of the provisions of this contract, the Contractor, within such reasonable time as the Contracting Officer may direct, shall submit complete and accurate cost and pricing data in support of any claim asserted under such provisions.

(b) With the submission of cost and pricing data the Contractor shall supply the following certification by a duly authorized corporate officer, partner, or owner, as applicable:

"This is to certify that, to the best of my knowledge and belief, the cost and pricing data herewith submitted to the Contracting Officer in support of a price adjustment under Supplement/Claim No. for _____ (identify by description) are accurate and complete and they are current as of _____ (date).

Date of Execution _____

Firm _____

Signature _____

Title _____"

(c) The Contracting Officer in accordance with the FAR clause "Audit and Records - Negotiation", 52.215-2, has the right to examine all books, records, documents and other data of the Contractor or subcontractor in order to evaluate the accuracy, completeness, and currency of cost or pricing data thus submitted. The Contractor shall insert an appropriate provision in all subcontracts for the purpose of making the requirements of this paragraph applicable thereto.

(End of clause)

AOC52.219-1 UTILIZATION OF SMALL BUSINESS CONCERNS (AUG 2004)

(a) It is the policy of the Government as declared by the Congress that a fair proportion of the purchases and contracts for supplies and services for the Government be placed with all types of small business concerns as determined by the size standards in 13 CFR 121.

(b) The Contractor agrees to accomplish the maximum amount of subcontracting to all types of small business concerns that the Contractor finds to be consistent with the efficient performance of this contract.

(End of clause)

AOC52.222-1 OVERTIME WORK - CONSTRUCTION (AUG 2004)

No extra reimbursement will be allowed for work performed outside regular working hours or on Saturday, Sundays or holidays and, for work performed in the District of Columbia, Presidential Inauguration Day, unless such work is ordered in writing by the Contracting Officer and payment therefore is authorized in the written order, and provided such work is not otherwise required to be performed under terms of the contract.

(End of clause)

AOC52.222-3 CONVICT LABOR (JUN 2004)

In connection with the performance of work under this contract the Contractor agrees not to employ any person undergoing sentence of imprisonment except as provided by Public Law 89-176, approved September 10, 1965, 18 U.S.C. 4082(c)(2).

(End of clause)

AOC52.222-7 WORKMEN'S COMPENSATION LAWS (JUN 2004)

The Contractor and his subcontractors employed on the site shall comply with the Workmen's Compensation Laws of the District of Columbia.

(End of clause)

FAR 52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997) ALTERNATE I (JULY 1995)

(a) "Hazardous material" as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in Paragraph (a) of this clause, to be

delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material
(If none, insert "None")

Identification No.

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award a "Material Safety Data Sheet", meeting the requirement of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in Paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the items(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under Paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to—

(i) Apprise personnel of the hazards to which they may be exposed in using, handling,

packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate and disclose the data for the Government for these purposes.

(2) To use, duplicate and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(i) Except as provided in Paragraph (i)(2), the Contractor shall prepare and submit a sufficient number of Material Safety Data Sheets (MSDS's), meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous materials identified in Paragraph.(b) of this clause.

(1) For items shipped to consignees, the Contractor shall include a copy of the MSDS's with the packing list or other suitable shipping document which accompanies each shipment. Alternatively, the Contractor is permitted to transmit MSDS's to consignees in advance of receipt of shipments by consignees, if authorized in writing by the Contracting Officer.

(2) For items shipped to consignees identified by mailing address as agency depots, distribution centers or customer supply centers, the Contractor shall provide one copy of the MSDS' in or on each shipping container. If affixed to the outside of each container, the MSDS's must be placed in a weather resistant envelope.

(End of clause)

AOC52.223-1 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA - SUPPLEMENT (JUN 2004)

(a) Except as provided in paragraph (c), the Contractor shall prepare and submit a sufficient number of Material Safety Data Sheets (MSDS's), meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous materials identified in paragraph (c) of this clause.

(b) For items shipped to consignees, the Contractor shall include a copy of the MSDS's with the packing list or other suitable shipping document which accompanies each shipment. Alternatively, the Contractor is permitted to transmit MSDS's to consignees in advance of receipt of shipments by consignees, if authorized in writing by the Contracting Officer.

(c) For items shipped to consignees identified by mailing address as agency depots, distribution centers or customer supply centers, the Contractor shall provide one copy of the MSDS' in or on each shipping container. If affixed to the outside of each container, the MSDS's must be placed in a weather resistant envelope.

(End of clause)

AOC52.223-3 SECURITY MARKINGS (JUN 2004)

(a) Before dissemination to subcontractors or other personnel, all AOC drawings and electronic copies thereof shall be considered at a minimum to be *sensitive but unclassified* (SBU). The following statement shall be imprinted on *each* page of drawings:

**PROPERTY OF THE UNITED STATES GOVERNMENT
COPYING, DISSEMINATING, OR DISTRIBUTING THESE DRAWINGS, PLANS OR
SPECIFICATIONS TO UNAUTHORIZED USERS IS PROHIBITED
Do not remove this notice
Properly destroy documents when no longer needed**

(b) The following paragraph shall be included on the cover page of the information (such as the cover page on a set of construction drawings and on the cover page of the specifications).

**PROPERTY OF THE UNITED STATES GOVERNMENT
COPYING, DISSEMINATING, OR DISTRIBUTING THESE DRAWINGS, PLANS OR
SPECIFICATIONS TO UNAUTHORIZED USERS IS PROHIBITED
Do not remove this notice
Properly destroy documents when no longer needed**

(End of clause)

AOC52.223-4 TRANSMISSION OR POSTING OF DRAWINGS/SPECIFICATIONS (JUN 2004)

Due to security issues, the contractor is strictly prohibited from placing or transmitting drawings and specifications on the internet or modem without express permission from the Architect of the Capitol.

(End of clause)

FAR 52.225-9 BUY AMERICAN ACT– CONSTRUCTION MATERIALS (JUNE 2003)

(a) *Definitions.* As used in this clause --
“Component” means an article, material, or supply incorporated directly into construction materials.
“Construction material” means an article, material, or supply brought to the construction site by

the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

“Cost of components” means—

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in Paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

“Domestic construction material” means—

(1) An unmanufactured construction material mined or produced in the United States, or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

“Foreign construction material” means a construction material other than a domestic construction material.

“United States” means the 50 States, the District of Columbia, and outlying areas

(b) *Domestic preference.* (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. The Contractor shall use only domestic construction material in performing this contract, except as provided in Paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to the construction material or components listed by the Government as follows:

(Contracting Officer to List applicable excepted materials or indicate “None”)

(3) The Contracting Officer may add other foreign construction material to the list in Paragraph (b)(2) of this clause if the Government determines that--

(i) The cost of domestic construction material would be unreasonable. The cost of a particular construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) *Request for determination of inapplicability of the Buy American Act.* (1)(i) Any contractor request to use foreign construction material in accordance with Paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with Paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in Paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination

(2) If the Government determines after contract award that an exception to the Buy American

Act applies and the Contracting Officer and the contractor negotiates adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in Paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act or Balance of Payments Program.

(d) *Data.* To permit evaluation of requests under Paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers;

<u>FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS PRICE COMPARISON</u>			
<u>Construction Material Description</u>	<u>Unit of Measure</u>	<u>Quantity</u>	<u>Price (Dollars)*</u>
<u>Item 1:</u>			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____
<u>Item 2:</u>			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

[Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate is issued).]*

(End of clause)

AOC52.225-1 BUY AMERICAN ACT - SUPPLEMENT (JUN 2004)

In addition to provisions of the above clause entitled, "Buy American Act", the General Provisions of the Legislative Branch Appropriations Act provides in part, as follows:

(a) It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available in the Act should be American-made.

(b) In providing financial assistance to or entering into any contract with, any entity using funds made available in the Act, the head of each Federal Agency, to the greatest extent practicable, shall provide to such entity a notice describing the statement made in Paragraph (a) above, by the Congress.

(End of clause)

AOC 52.228-2 INSURANCE - WORK ON A GOVERNMENT INSTALLATION (SEP 2004)

(a) The Contractor shall, at his own expense, provide and maintain during the entire performance of this contract at least the kinds and minimum amounts of insurance as required in this clause.

(b) Within twenty (20) calendar days after the date of contract award or before commencing work under this contract, whichever is earlier, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. A Certificate of Insurance evidencing the Contractor's compliance with the requirements of this clause, identifying all policies of insurance and sureties proposed for the provision of liability coverage pertinent to the work of the instant contract, including the endorsement required in this paragraph, and manually countersigned by an authorized representative of the insurance company shall be submitted in accordance with the time frame stated in this paragraph. All policies for liability protection, bodily injury, or property damage shall include the United States of America, acting by and through the Architect of the Capitol, as an additional insured with respect to operations under this contract. Each policy of insurance shall contain the following endorsement, which may be attached as a rider:

"It is understood and agreed that the Contractor's Insurance Company or surety shall notify the Architect of the Capitol, in writing, thirty (30) calendar days in advance of the effective date of any reduction in or cancellation of this policy."

(c) Insurance and required minimum liability limits are:

(1) Appropriate bodily injury and property damage liability insurance, with limits of not less than \$500,000 for each occurrence and \$2,000,000 for annual aggregate, including requirements for protection of hoisting and scaffolding operations, when applicable, and servicing areas adjacent to the building;

(2) Automobile bodily injury liability insurance with limits of not less than \$200,000 for each person and \$500,000 for each accident, and property liability insurance, with a limit of not less than \$20,000 for each accident. A combined single limit for these coverages is acceptable; and/or

(3) Workmen's compensation insurance as required by the laws of (1) the District of Columbia for work performed on a Government site located in the District of Columbia; (2) the State of Maryland for work performed on a Government site located in Maryland; or (3) the Commonwealth of Virginia for work performed on a Government site located in Virginia.

(d) The Contractor shall insert the substance of this clause, including this paragraph, in subcontracts under this contract that require work on a Government installation, and shall require subcontractors to provide and maintain the insurance required in this clause. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(End of clause)

AOC52.228-5 PERFORMANCE AND PAYMENT BONDS - CONSTRUCTION (SEP 2004)

(a) *Definitions.* As used in this clause, "original contract price" means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) *Amount of required bonds.* Unless the resulting contract price is \$25,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance Bonds: (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds: (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(c) *Additional bond protection.* (1) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(2) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bonds or to obtain an additional bond.

(d) *Furnishing executed bonds.* The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in Item 12 of the form entitled, "Solicitation, Offer, and Award (Construction, Alteration, or Repair)" or otherwise specified by the Contracting Officer, but in any event, before starting work.

(e) *Surety or other security for bonds.* The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the

U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(f) Notice of subcontractor waiver of protection (40 U.S.C. 270 b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

AOC52.228-6 NOTICE TO SURETIES (JUN 2004)

The final inspection and acceptance of the work included in this contract shall not be binding or conclusive upon the Government if it shall subsequently appear that the Contractor has willfully or fraudulently, or through collusion with the representatives of the Government in charge of the work, supplied inferior material or workmanship, or has departed from the terms of the contract, or if defects of any kind should develop during the period that the guarantees covering such material and workmanship are in force. In such event, the Government shall have the right, notwithstanding such final acceptance and payment, to have the work removed and to cause the work to be properly performed and satisfactory material supplied to such extent as, in the opinion of the Contracting Officer, may be necessary to finish the work in accordance with the drawings, if any, and specifications, at the expense of the Contractor and the sureties on its bond, and the Government shall have the right to recover against the Contractor and its sureties the cost of such work, together with such other damages as the Government may suffer because of the default of the Contractor in the premises, the same as though such acceptance and final payment had not been made.

(End of clause)

AOC52.232-4 PAYMENTS - CONSTRUCTION (JUN 2004)

(a) *Payment of price.* The Government shall pay the Contractor the contract price as provided in this contract.

(b) *Progress payments.* The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, or estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested;

- the contract;
- (ii) A listing of the amount included for work performed by each subcontractor under the contract;
 - (iii) A listing of the total amount of each subcontract under the contract;
 - (iv) A list of the amounts previously paid to each such subcontractor under the contract; and
 - (v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

- (i) Consideration is specifically authorized by this contract; and
- (ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) *Contractor certification.* Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete Paragraph (c)(4) from the certification, the certification is still acceptable.)

I hereby certify, to the best of my knowledge and belief, that--

- (1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;
- (2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification.
- (3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and
- (4) This certification is not to be construed as final acceptance of a subcontractor's performance.

_____(Name)

_____(Title)

_____(Date)

(d) *Retainage.* In making such progress payments, there shall be retained 10 percent of the estimated amount until final completion and acceptance of all work required by the contract. However, if the Contracting Officer, at any time after 50 percent of the work has been completed, finds that satisfactory progress is being made, he may authorize any of the remaining partial payments to be made in full. Also, whenever the work is substantially complete, the Contracting Officer, if he considers the amount to be retained to be in excess of the amount adequate for the protection of the Government, at his discretion, may release to the Contractor all or a portion of such excess amount. Furthermore, on completion and acceptance of each separate building, public work, or other division of the contract, on which the price is stated separately in the contract, payment may be made therefore without retention of a percentage.

(e) *Title, liability, and reservation of rights.* All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(f) *Final payment.* The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claims to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(g) Invoices shall be issued monthly as defined in Paragraph (b) in which services are performed by the Contractor. Properly certified invoices shall be FAXED to the Architect of the Capitol, Accounting Division at (202) 226-2580. Information concerning requirements for payment requisitions must be secured by telephoning the Accounting Officer at (202) 226-2552. Payment will be made on a monthly basis. To assist the AOC in making timely payments, the Contractor is requested to furnish the following additional information on the invoice:

(1) Contract Number;

- (2) Name and address of Contractor;
- (3) Invoice Date;
- (4) Period the payment covers; and
- (5) Amount by line item as identified in the Schedule.

(h) Each invoice shall be in accordance with the SCHEDULE OF SUPPLIES OR SERVICES AND PRICES/COSTS FOR CONSTRUCTION completed during the payment period. The Contractor shall keep accurate time records for each of his personnel employed in the work, and information copies of the Contractor's time records (payrolls) shall be submitted with each invoice for payment. Original certified copies of Contractor's payrolls shall have been submitted weekly in arrears to the Contracting Officer in accordance with the Davis Bacon Act.

(i) Payments will be made directly to your financial institution through Direct Deposit/Electronic Funds Transfer (DD/EFT). The Contractor's attention is directed to the requirements of AOC52.232-6, Payment By Electronic Funds Transfer - Other than Central Contractor Registration". (End of Clause)

AOC52.232-6 PAYMENT BY ELECTRONIC FUNDS TRANSFER - OTHER THAN CENTRAL
CONTRACTOR REGISTRATION (JUN 2004)

(a) *Method of payment.* (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT) except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment;
or

(ii) Request the Government to delay payment until such time as the Government makes payment by EFT (but see paragraph (d)).

(b) *Mandatory submission of Contractor's EFT information.* (1) The Contractor is required to provide the Government with the information required to make payment by EFT (see paragraph (i) of this clause). The contractor shall provide this information directly to the office designated in paragraph (k) to receive that information (hereafter: "designated office") by three working days after notification of contract award. If not otherwise specified in this contract, the payment office is the designated office for receipt of the contractor's EFT information. If more than one designated office is named for the contract, the contractor shall provide a separate notice to each office. In the event that the EFT information

changes, the contractor shall be responsible for providing the updated information to the designated office(s).

(2) If the contractor provides EFT information applicable to multiple contracts, the contractor shall specifically state the applicability of this EFT information in terms acceptable to the designated office. However, EFT information supplied to a designated office shall be applicable only to contracts that identify that designated office as the office to receive EFT information for that contract.

(c) *Mechanisms for EFT payment.* The Government may make payment by EFT through the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) *Suspension of payment.* (1) Notwithstanding the provisions of any other clause of this contract, the Government is not required to make any payment under this contract until after receipt, by the designated payment office, of the correct EFT payment information from the Contractor. Until receipt of the correct EFT information, any invoice or contract financing request shall be deemed not to be a valid invoice.

(2) If the EFT information changes after submission of correct EFT information, the Government shall begin using the changed EFT information no later than the 30 days after its receipt by the designated office to the extent payment is made by EFT. However, the Contractor may request that no further payments be made until the changed EFT information is implemented by the payment office.

(e) *Liability for uncompleted or erroneous transfers.* (1) If an uncompleted or erroneous transfer occurs because the Government failed to use the Contractor-provided EFT information in the correct manner, the Government remains responsible for--

- (i) Making a correct payment; and
- (ii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because Contractor's EFT information was incorrect at the time of Government release or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment and the provisions of paragraph (d) shall apply.

(f) *EFT and assignment of claims.* If the contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the contractor shall require as a condition of any such assignment that the assignee shall provide the EFT information required by paragraph (i) of this clause to the designated office and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the contractor. EFT information that shows the ultimate recipient of the transfer to be other than the contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of Paragraph (d) of this clause.

(g) *Liability for change of EFT information by financial agent.* The Government is not liable for errors resulting from changes to EFT information provided by the contractor's financial agent.

(h) *Payment information.* The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address in the contract.

(i) *EFT Information.* The contractor shall provide the following information to the designated payment office. The contractor may supply this data for this or multiple contracts (see paragraph (b) of this clause). The Contractor shall designate a single financial agent per contract capable of receiving and processing the EFT information using the EFT methods described in paragraph (c) of this clause. The information required is as follows:

- (1) The contract number;
- (2) The contractor's name and remittance address as stated in the contract(s);
- (3) The signature (manual or electronic, as appropriate), title, and telephone number of the contractor's official authorized to provide this information;
- (4) The name, address, and 9-digit Routing Transit Number of the contractor's financial agent;
and
- (5) The contractor's account number and the type of account (checking, saving or lockbox).

(j) The Contractor shall send all EFT information, and any changes to EFT information to the office designated in paragraph (k) of this clause. The Contractor shall not send EFT information to the payment office, or any other office than that designated in paragraph (k). The Government need not use any EFT

information sent to any office other than that designated in paragraph (k).

(k) Designated office:

Name:

Architect of the Capital

Accounting Division

Mailing Address:

2nd and D Streets SW

Ford House Office Building

Washington, DC 20515

Telephone:

(202) 226-2552

Facsimile:

(202) 225-7321

(End of clause)

AOC52.232-9 PAYMENT OF INTEREST ON CONTRACTOR CLAIMS (JUN 2004)

(a) If an appeal is filed by the Contractor from a final decision of the Contracting Officer under the Disputes paragraph of this contract, denying a claim arising under the contract, simple interest on the amount of the claim finally determined owed by the Government shall be payable to the Contractor. Such interest shall be at the rate determined by the Secretary of the Treasury pursuant to Public Law 92-41, 85 Stat. 97, from the date the Contractor furnishes to the Contracting Officer his written appeal under the Disputes paragraph of this contract, to the date of (1) a final judgement by a court of competent jurisdiction, or (2) mailing to the Contractor of a change order, or a supplemental agreement for execution either confirming completed negotiations between the parties or carrying out a decision of a contract appeals board.

(b) Notwithstanding Paragraph (a) above, (1) interest shall be applied only from the date payment was due, if such date is later than the filing of appeal, and (2) interest shall not be paid for any period of time that the Contracting Officer determines the Contractor has unduly delayed in pursuing his remedies before a board of contract appeals or a court of competent jurisdiction.

(End of clause)

AOC52.232-12 ASSIGNMENT - SUPPLEMENT (MAR 2005)

Neither the contract nor any interest therein shall be assigned. However, moneys due or to become due under the contract may be assigned in accordance with the provisions of FAR clause 52.232-23 ASSIGNMENT OF CLAIMS.

(End of clause)

AOC52.233-1 DISPUTES (JUN 2004)

(a) Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Contracting Officer shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Contracting Officer a written appeal addressed to the head of the agency involved. The decision of the head of the agency or his duly authorized representative for the determination of such appeals shall be final and conclusive. This provision shall not be pleaded in any suit involving a question of fact arising under this contract as limiting judicial review of any such decision to cases where fraud by such official or his representative or board is alleged; **provided, however**, that any such decision shall be final and conclusive unless the same is fraudulent or capricious or arbitrary or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding under this paragraph, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract and in accordance with the Contracting Officer's decision.

(b) This paragraph does not preclude consideration of questions of law in connection with decisions provided for in Paragraph (a) above. Nothing in this contract, however, shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

(End of clause)

AOC52.233-2 CLAIMS FOR EQUITABLE ADJUSTMENTS - WAIVER AND RELEASE OF CLAIMS (JUN 2004)

(a) Whenever the Contractor submits a claim for equitable adjustment under any paragraph of this contract which provides for equitable adjustment of the contract, such claim shall include all types of adjustments in the total amounts to which the paragraph entitles the Contractor, including but not limited to adjustments arising out of delays or disruptions or both caused by such change. Except as the parties may otherwise expressly agree, the Contractor shall be deemed to have waived (1) any adjustments to which it otherwise might be entitled under the paragraph where such claims fail to request such adjustments, and (2) any increase in the amount of equitable adjustments additional to those requested in its claim.

(b) Further, the Contractor agrees that, if required by the Contracting Officer, he will execute a release, in form and substance satisfactory to the Contracting Officer, as part of the supplemental agreement setting forth the aforesaid equitable adjustment, and that such release shall discharge the Government, its officers, agents and employees, from any further claims, including but not limited to further claims arising out of delays or disruptions or both, caused by the aforesaid change.

(End of clause)

AOC52.233-3 LIMITATION ON DAMAGES FOR DELAY (JUN 2004)

(a) The Architect shall not be obligated or liable to the Contractor for, and the Contractor hereby expressly waives any claims against the Architect on account of any damages, of any nature whatsoever, which the Contractor, or its subcontractor at any tier may incur as a result of delays, interferences, disruptions, suspensions, changes in sequence or the like arising from or out of any act or omission of the Architect, it being understood and agreed that the Contractor's sole and exclusive remedies in such event shall be a reimbursement of direct costs necessarily incurred as a result of the foregoing causes, and an extension of the contract time, but only in accordance with the provisions of the Contract Documents.

(b) For the purposes of this clause, the term "Damages" shall include all indirect and/or impact costs which shall include, without limitation: unabsorbed Home Office Overhead (including calculations under the "Eichleay Formula"), Idle Labor and Equipment, Loss of Productivity, and Interest; the term "Damages" shall not include on-site direct costs, which shall include direct labor (superintendence, labor, time-keeping, and clerical work) direct materials and supplies (including material handling), direct equipment, restoration and cleanup, overhead and profit (but only as permitted under the clauses "Changes" and "Changes - Supplement", taxes, insurance, and bonding costs, which will be calculated in accordance with the clauses "Changes" and "Changes - Supplement". Provided, however, that the accounting practice of treating these costs as "direct" shall be in accordance with

(1) The Contractor's established and consistently followed cost accounting practices for all work; and

(2) FAR Cost Accounting Cost Principles and Procedures (FAR Part 31).

(c) To the extent that any other provision of this contract provides for the payment of damages, as defined in this clause, to the Contractor and is thus inconsistent with the provisions of this clause, such other provision will be superseded hereby with respect to the issue of damages.

(End of clause)

FAR 52.236-5 MATERIALS AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall

furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)

FAR 52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT,
UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

AOC52.236-1 ACCESS TO WORK (JUN 2004)

(a) The Contracting Officer or his representative may visit and inspect the Contractor's plant, without advance notice, at any time during the course of this contract, and he shall be granted every available assistance to facilitate such inspection.

(b) The Contracting Officer and proper members of his staff shall at all times have access to the work, and the Contractor shall provide proper and safe facilities for such access and for inspection.

(End of clause)

AOC52.236-2 OTHER CONTRACTS AND WORK (JUN 2004)

(a) The Contractor shall fully inform himself as to conditions relating to construction and labor under which other work, if any, is being performed, or is to be performed, by or for the Government, by contract or otherwise, where such work may affect or be affected by, operations under this Contract.

(b) Notwithstanding the performance by other parties of work at the site during performance of this contract, the Contractor shall prosecute the work diligently and continuously, and he shall cooperate in every way with such other parties. The Contractor shall give such other parties, to the extent their work is affected by his work, all information necessary for the proper execution of their work, without delay. The Contractor shall so arrange and conduct his work that other parties may complete their work at the site according to schedule. All other work under the instant contract shall be carefully coordinated with work under such other contracts.

(End of clause)

AOC52.236-3 ACCIDENT PREVENTION AND SAFETY AND HEALTH PROGRAMS - CONSTRUCTION (SEP 2004)

(a) The Contractor shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others and comply with the safety and health standards published in 41 C.F.R. Part 50-205, including any matters incorporated by reference therein. He shall also be responsible for all materials delivered and work performed until completion and final acceptance of the entire contract work, except for any completed unit thereof which theretofore may have been finally accepted.

(b) *Williams-Steiger Occupational Safety and Health Act.* The Contractor shall also comply in all aspects of the job with the regulations issued by the Secretary of Labor pursuant to the Williams-Steiger Occupational Safety and Health Act of 1970, as set forth in Title 29 of the Code of Federal Regulations. The Contractor shall bring to the attention of the Architect any work encountered which may involve entry into a suspected confined space as defined by OSHA. A determination will be made by the Architect, and if the area is deemed a permit required confined space, additional protective measures will be needed, per OSHA requirements.

(c) *National Fire Protection Association standards.* The Contractor shall comply with all applicable standards of the National Fire Protection Association relative to fire prevention, except to the extent that more exacting requirements are specified or imposed by the Contracting Officer. The Contractor shall keep and properly maintain fire prevention devices at the job site and shall take all possible precautions deemed necessary by the Government representative in charge of the work.

(d) *Protection of property and persons.* (1) The Contractor shall protect all of his material and work at the site, whether incorporated in the work or not, against damage or loss from any cause, and he shall take all necessary precautions against damage to all other work and material on the site. He shall provide and maintain necessary safeguards for protection of his employees, Government employees and the public generally, and he shall take all other proper precautions for their protection against injury. He shall comply with all directives and regulations of the Contracting Officer and other proper authorities relative to the use of public property.

(2) The Contractor shall protect all electric, telephone, computer facilities, water, gas, sewer, steam and other underground utility lines, in sidewalks, streets or other areas in, under or around the site, to the satisfaction of the Contracting Officer, the Government of the District of Columbia, and all other authorities having jurisdiction.

(3) The performance of work at the site by other parties shall not relieve the Contractor from any liability for loss or damage or from his obligations under this contract. No agreement or arrangement between the Contractor and others as to a division or proportionate share of liability for loss or damage incurred, or of the cost of insurance, shall in any way relieve the Contractor of such liability or his obligations under this contract.

(e) The Contractor shall comply with the requirements of FAR 52.236.13, Accident Prevention. In the event that conditions on the site pose an imminent danger or threat to the Contractor's workers, the public, Government employees, other persons, or to Capitol complex structures and property of historical significance, the Contracting Officer can verbally order the Contractor to suspend work operations in the specified area until said conditions are corrected to the Contracting Officer's satisfaction. The Contracting Officer shall promptly issue a written order to suspend the work to the Contractor formalizing the specifics of the verbal suspension of work.

(f) The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(End of clause)

AOC52.236-4 CUTTING AND PATCHING (JUN 2004)

Prior to initiation of the work operations of either cutting or patching, as a necessary requirement of the work under this contract, of any structural component or of lintels, stair systems, piping, duct work, vessels, equipment and like items in the building, the Contractor shall consult with the Contracting Officer and follow explicitly his directions and stated requirements concerning methods, materials, the manner in which the work is performed, and the level of competence and skill possessed by Contractor's employees, or those of subcontractors, who are proposed to be employed in said cutting and/or patching operations.

(End of clause)

AOC52.236-5 CLEANING AND RESTORING (JUN 2004)

- (a) The contractor shall remove dirt and debris resulting from the operations under this contract daily.
- (b) The Contractor shall, as a condition precedent to the final acceptance of the work, remove from the site of the work all remaining plant, installations, temporary barricades, temporary facilities, equipment, tools, materials, refuse, rubbish and waste, used or accumulated in connection with, but not incorporated in, the work, unless otherwise specified or directed, and he shall leave the buildings, grounds, streets, and all public places occupied by him in a thoroughly clean, neat and satisfactory condition.

(End of clause)

AOC52.236-8 SCHEDULING OF WORK (AUG 2004)

- (a) The Contractor shall, before commencing work on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of partial payments until the Contractor submits the required schedule.
 - (b) The Contractor shall furnish sufficient forces, construction plant and equipment, and shall work such hours as necessary to insure prosecution of work in accordance with the approved schedule. If, in the opinion of the Contracting Officer, the Contractor falls behind in the scheduled progress, the Contractor shall take such steps as may be necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained. The provisions of this subparagraph shall not be construed as prohibiting work on Saturdays, Sundays and holidays and, for work performed in the District of Columbia, Presidential Inauguration Day, if the Contractor so elects and if approved.
 - (c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.
- (End of clause)

AOC52.236-9 SCHEDULE OF VALUES (JUN 2004)

(a) The Contractor shall, in accordance with the requirements of the Contracting Officer, prepare and submit for approval a schedule of estimated values of all parts of the work, and shall submit such quantity breakdowns pertinent thereto as the Contracting Officer may deem necessary for the proper checking of partial payment requisitions and for other administrative purposes. The total of the schedule of values shall equal the amount of the contract. The values employed in making this schedule will be used only for determining partial payments; they will not be used as a basis for determining an increase or decrease in the contract price. The listings and subdivisions of this schedule for estimated costs and quantity breakdowns shall be as approved by the Contracting Officer.

(b) The submission and approval of the schedule of values shall be a condition precedent to the making of partial payments. (End of clause)

AOC52.236-10 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (JUN 2004)

(a) The Contractor shall keep on the site of the work a copy of the drawings and specifications, and of approved shop drawings, product data and samples and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, or in case of discrepancy either within the figures, within the drawings, or within the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information he considers necessary, unless otherwise provided.

(b) “Shop drawings” means drawings submitted to the Government by the Contractor, subcontractor, any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract.

(c) The Contractor shall submit to the Contracting Officer for approval shop drawings, product data and samples as required under the various sections of this Project Manual. The Contractor shall coordinate all such submittals, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings, product data, or samples submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for re-submission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors

or omissions in such submittals, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with Paragraph (d) below.

(d) If shop drawings, product data, or samples show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(e) Upon completing the work under this contract, the Contractor shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the equipment is completed and accepted. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings, product data or samples delivered under this contract.

(f) The provisions of this entire paragraph shall be included in all subcontracts at any tier.

AOC52.236-12 PRODUCT DATA AND SAMPLES (JUN 2004)

(a) Product data shall mean information (e.g., catalog cuts, standard illustrations, drawings, performance charts, data and brochures) pertinent to a particular product, equipment or material required as a part of the work. Product data is required to establish, for the purposes of evaluation and approval, details of the product offered in response to specifications elsewhere in the contract documents. Product data pertains to significant elements such as (1) design; (2) materials; (3) components; (4) performance characteristics; and (5) methods of manufacture, assembly, construction, or operation. The term includes, in addition to the above, the manufacturer's standard printed recommendations for application and use, compliance with recognized standards of trade associations and testing agencies, and the application of their labels and seals (if any).

(b) Samples are physical examples of materials, equipment or workmanship that will be used by the Contracting Officer to establish standards by which the work will be judged.

(c) Samples not subject to destructive tests may be retained by the Contracting Officer until completion of the work; they will then be returned to the Contractor, at his own expense, if he so requests in writing.

(End of clause)

FAR 52.242-14 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of the contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this Article for any suspension, delay or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this article shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

FAR 52.243-4 CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes-

- (1) In the specifications (including drawings and designs);
- (2) In the method or manner of performance of this work;
- (3) In the Government-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; Provided, that the Contractor gives the Contracting Officer written notice stating-

- (1) The date, circumstances, and source of the order; and
- (2) That the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall

be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of the proposal for adjustment may be included in the notice under paragraph (b) of this clause.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract
(End of Clause)

AOC52.243-1 CHANGES - SUPPLEMENT (JUN 2004)

(a) *Definitions.* (1) A "change order" is a unilateral contract modification, signed by the Contracting Officer, which describes and identifies a particular change in the requirements as permitted by the FAR clause, 52.243-4, "Changes" and authorizes the contractor to begin performance with the changed requirements. The change order may reference pertinent oral or written directives, provide an adjustment to the contract price and/or time for performance, and direct the contractor to submit a proposal for definitization of the change order.

(2) A "supplemental agreement" is a bilateral contract modification, signed by the contractor and the Contracting Officer, which either authorizes the contractor to begin performance with the changed requirements in accordance with the equitable adjustment agreed to prior to commencement of performance of the changed requirements or definitizes a change order after agreement of an equitable adjustment to the contract.

(3) *Request for Proposal.* A request by the Contracting Officer or his duly authorized representative for the contractor to submit a proposal for requirements contemplated to be changed. Such proposal shall be submitted within the time limit specified in the request and in accordance with the requirements and limitations of this clause.

(b) *Authorization of changes.* All changes to contract requirements will be authorized in writing by

the Contracting Officer through one of the following methods:

- (1) A Supplemental Agreement, with the concurrence of the contractor; or
 - (2) A unilateral Change Order.
- (c) *Submission of proposals and cost breakdowns by the contractor.*
- (1) Proposals for changes to the contract requirements shall include a brief description of the change; a breakdown of costs as outlined hereinafter; and a time impact analysis (fragnet).
 - (2) In considering proposals for changes involving added requirements, omitted requirements, or any combination thereof, the Contracting Officer or his duly authorized representative will make check-estimates in such detail as he deems necessary with the view of arriving at equitable adjustments. With each proposal, the contractor shall submit separately an itemized breakdown as per "Exhibit A" hereof, which shall include, but not be limited to, the following:
 - (i) Direct labor costs;
 - (ii) Social Security and Unemployment Insurance Taxes;
 - (iii) Workmen's compensation and general liability insurance;
 - (iv) Direct material quantities and unit prices (separated into trades);
 - (v) Construction equipment;
 - (vi) Overhead; and
 - (vii) Profit.
 - (3) If the contractor believes that the change in the contract requirements affects the contract period of performance, as required by AOC52.211-5, Commencement, Prosecution, and Completion of Work, of the Supplementary Conditions, appropriate substantiation must be submitted for evaluation/review.
 - (4) A complete proposal, including breakdown of cost and time impact, shall be submitted by the contractor within the time frame stipulated in calendar days by the Government for each proposed change. Generally, complete proposals shall be submitted by the contractor within 7 calendar days after the contractor receives the request for proposal, although this time frame may be adjusted for more complex or more urgent requirements. Except as provided by an individual contract modification, no payment for a change order will be made until a supplemental agreement has been signed by the contractor and the Contracting Officer. If complete proposals are not received timely, the Contracting

Officer, after consultation with his authorized representative, may determine the cost of the change and the time impact and issue a change order based upon this determination with the stipulation that if a supplemental agreement is not negotiated within a reasonable amount of time, this determination will be final and conclusive, subject only to the contractor's rights of appeal as provided in AOC52.233-1, Disputes, of the General Conditions.

(d) *Allowances for overhead and profit.* (1) The following percentages will be allowed for overhead and profit:

(i) The contractor shall receive, as a percentage of the cost of all work performed by his own organization, an amount not to exceed 10% overhead and not to exceed 10% profit; and

(ii) If subcontractor(s) are involved in the change, a fee in an amount not to exceed 10% as a percentage of the total price of the subcontractor portion of the change.

(iii) Subcontractor(s) to the prime contractor (first tier subcontractor(s)) shall receive, as a percentage of the cost of all work performed by or for it, a total amount not to exceed 10% overhead and not to exceed 10% profit.

(iv) The percentages for fees, overhead, and profit permitted by the above shall be allowed only for the contractor and its first tier subcontractors. Percentages for fees, overhead, and profit in any amount will be not be allowed for subcontractors of any other tier.

(2) Percentages for overhead allowed are deemed to include, but shall not be limited to, the following:

(i) Field Overhead Items.

(A) Trailer;

(B) Storage Facilities;

(C) Contractor's and subcontractor's superintendence;

(D) Construction equipment/tools, except those that are specially required for a specific change;

(E) Utilities;

(F) Contractor's and subcontractor's field office, administrative/support staff;

(G) Cost of preparing record drawing changes, correspondence, etc., relating to the contract;

- (H) Job site safety aids; and
- (I) Cleaning and maintenance of nuisance debris from jobsite.
- (ii) Office Overhead Items for Contractor and Subcontractors.
 - (A) Maintenance/operation of principal or branch offices;
 - (B) Personnel costs;
 - (C) Cost for preparing correspondence, fragnets, etc., relating to the contract;and
 - (D) Cost of insurance and bonds, except for insurance costs relating to direct labor, as outlined in "Exhibit A" .

(iii) For changes which include custom items unique to the project and which are fabricated off-site, the fabricator, whether the contractor or a subcontractor at any tier, shall furnish a breakdown of costs associated with the work in the fabricating plant. This breakdown shall include labor, material, equipment and overhead/plant costs in sufficient detail to allow for review by the Contracting Officer or his duly authorized representative. Costs charged to overhead/plant shall be allowable costs for the fabricator, whether he is the contractor or a subcontractor at any tier, provided that the costs claimed are consistent with the provisions of Subpart 31.203 of the Federal Acquisition Regulation (Chapter 1, Title 48, Code of Federal Regulations). An amount not to exceed 10% of the cost of the fabricated item will be allowed for the fabricator's profit. If the fabricator is a subcontractor, the overhead and profit percentages for the contractor and any subcontractor at a higher tier having a contractual relationship with the fabricator shall be allowed in accordance with this clause.

(e) *Changes involving decreases in price.* For changes involving only a decrease in price, the contractor and subcontractors shall return as credit for overhead and profit those same percentages which are allowed for like changes involving increases in price. On changes involving both an increase and a decrease in price, overhead and profit will be allowed only on the net increase.

(f) *Changes involving increases or decreases on basis of contract specified unit prices.* No percentages for overhead and profit will be added to, or deleted from, any unit prices in event of an increase or decrease in the contract requirements on the basis of contractual unit prices.

EXHIBIT A

TYPICAL FORM OF BREAKDOWN FOR PRICE ADJUSTMENT

SUBCONTRACTORS' BREAKDOWN

Items Involved	Quantities	Unit Cost	Equipment	Material	Labor	Extensions		Unit Cost
						Totals	Final Totals	
Excavation (Identify)								
• Volume								
• Crane Operator								
• Laborers								
Shoring (Identify)								
• Area								
• Welder								
Subcontractor Total								

PRIME CONTRACTOR'S BREAKDOWN

Items Involved	Quantities	Unit Cost	Equipment	Material	Labor	Extensions		Unit Cost
						Totals	Final Totals	
West Wall (Cinder Block)								
• Area								
• Block 8x8x16								
• Mortar								
• Mason								
• Laborer								

Subtotal								
Prime Contractor's Total								
Prime Contractor's Overhead and Profit on Subcontractor								
Total								

(End of clause)

AOC52.244-1 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS
OF THE WORK (JUN 2004)

(a) The Contractor shall perform all work with his own forces, unless written approval is obtained from the Contracting Officer for subcontracting a portion of the work.

(b) In the event the Contractor obtains approval for subcontracting a portion of the work, the following paragraphs shall apply:

(1) Each subcontractor shall be experienced in and capable of performing in a satisfactory manner all work in his speciality, and shall meet the standard of competence hereinbefore established for the Contractor.

(2) Before awarding any subcontracts the Contractor shall submit for approval the names, addresses and qualifications of subcontractors, if any, that he proposes to employ for any branch of the work, and no subcontractor shall be permitted to proceed with any branch of the work until approved. If required, the Contractor shall furnish accurate records, detailed photographs of work performed, and any other information desired in connection with any subcontractor as to whose ability there may exist any doubt in the mind of the Contracting Officer.

(c) The Contractor shall be responsible for all acts of subcontractors employed by him under this contract, and for their compliance with all terms and provisions of the contract applicable to their performance. The Contractor shall continuously coordinate the work of all sub-contractors to assure proper processing and progress of the Work. The Contractor shall require each subcontractor to (1) examine the project schedule, shop drawings and the work of other trades and all sections of the specifications to the extent necessary for satisfactory Installation of his work, and connection between his work and the work of other trades; (2) coordinate his work accordingly; and (3) cooperate with other

trades toward timely and satisfactory completion of the entire Work.

(d) Organization of the specifications into sections and subsections and the arrangement of drawings shall not control the Contractor in dividing work among subcontractors or in establishing the extent of work to be performed by any trade.

(e) Nothing contained in the contract documents shall create any contractual relations between any subcontractor and the Government.

(End of clause)

AOC52.245-2 GOVERNMENT-FURNISHED PROPERTY (NOV 2004)

(a) For the purposes of this clause, Government-furnished “property” includes cell phones and telephones, personal digital assistants, computers (including laptops), electronic devices, services such as network access, tools, furnished space, storage, utilities, furnishings, equipment, and any other item or service provided by the AOC to the contractor.

(b) No AOC equipment or property can be provided under this contract unless specifically negotiated as part of the award price. If, after contract award, it becomes necessary or advisable to issue AOC property to the contractor, the contract price shall be reduced by a reasonable amount that reflects the price the contractor would pay if providing the property.

(c) The Contracting Officer’s Technical Representative (COTR) for this contract is responsible for coordinating the issuance and return of Government-furnished property.

(d) Any Government-furnished property provided to the contractor for use during performance of this contract shall be issued to the contractor’s representative and recorded on AOC Form 1423, AOC PROPERTY ISSUED TO CONTRACTORS. The contractor’s representative shall be responsible for the ensuring the proper care and use of the Government-furnished property, whether used by the contractor representative or another contractor employee. Government-furnished property provided by the AOC can be used only for the conduct of official business on behalf of the AOC. The contractor is specifically prohibited from using AOC-furnished property for personal use or to conduct operations that benefit other Government agency contracts or other contractor activities that do not directly support AOC contracts.

(e) All information technology property that requires interface or connection to the AOC network must be provided by the AOC. The use of non-AOC IT property that requires interface or connection to the AOC network is strictly prohibited.

(f) All contractor employees who require access to the AOC network or who are issued a personal digital assistant must complete and sign the “Non-disclosure Agreement for Contract Employees Conditional Access to Sensitive but Unclassified Information for The Architect of The Capitol” before

access will be granted. The COTR is responsible for providing the non-disclosure agreements to the AOC Office of Information Resources Management.

(g) All Government-furnished property shall be returned by the contractor to the COTR in the same condition as issued, with allowances for wear and tear that occurs with reasonable care and use. Failure to return Government-furnished property or the return of Government-furnished property that has not been properly maintained and used may result in a reduction to the contract price that reflects the market replacement value of the property or the market price to repair or restore the property to its condition when issued to the contractor.

(End of clause)

AOC52.246-1 FINAL INSPECTION AND ACCEPTANCE - CONSTRUCTION - SUPPLEMENT (SEP 2004)

(a) No inspection or other action of the Government shall be construed to constitute a final acceptance of any portion of the work under this contract until all work under the contract is completed. None of the work under the contract shall be deemed to be finally accepted until the Contractor, upon completion and final inspection of all work, is notified in writing of final acceptance of work under the contract, or in lieu thereof, until final payment of the final voucher as prescribed in AOC52.232-4, Payments - Construction. The provisions of FAR clause 52.246-12, Inspection of Construction are hereby modified by the provisions of this paragraph with respect to the finality of acceptance of any portion of the work by the Government prior to completion of all work under the contract.

(b) The Contractor shall notify the Contracting Officer, at least 10 days in advance, of the date the work will be fully complete and ready for final inspection. Any additional costs incurred by the Government due to necessary reinspection of work found not ready for final inspection upon the Contractor's notice of completion will be charged to the Contractor and deducted from the contract price.

(End of clause)

AOC52.246-6 ADDITIONAL WARRANTY COVERAGE (JUN 2004)

If the Contractor receives from any manufacturer, supplier or subcontractor additional warranty coverage on the whole or any component of the work required by this contract, in the form of time including any pro rata arrangements, or the Contractor generally extends to his commercial customers a greater or extended warranty coverage, the Government shall receive corresponding warranty benefits.

(End of clause)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these addresses: www.gsa.gov or www.govcon.com

<u>CLAUSE TITLE</u>	<u>DATE</u>	<u>F A R NUMBER</u>
GRATUITIES	APR 1984	52.203-3
COVENANT AGAINST CONTINGENT FEES	APR 1984	52.203-5
RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	JUL 1995	52.203-6
AUDIT AND RECORDS - NEGOTIATION	JUN 1999	52.215-2
CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION	SEP 2000	52.222-4
DAVIS-BACON ACT	FEB 1995	52.222-6
WITHHOLDING OF FUNDS	FEB 1988	52.222-7
PAYROLLS AND BASIC RECORDS	FEB 1988	52.222-8
APPRENTICES AND TRAINEES	FEB 1988	52.222-9
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SUBCONTRACTS (LABOR STANDARDS)	FEB 1988	52.222-11
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SUPPLEMENTARY CONDITIONS

AOC52.201-1 CONTRACTING OFFICER'S AUTHORITY (JUN 2004)

The Contracting Officer is the only person authorized to make or approve any changes in any of the requirements of this contract, notwithstanding any provision contained elsewhere in this contract. In the event that the Contractor makes any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in costs incurred as a result thereof.

(End of clause)

AOC52.201-2 CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) (MAR 2005)

The Government shall provide the name, address and telephone number of the COTR at the time of contract award and the duties thereby delegated to that person. Any subsequent change to the individual or the individual's responsibilities will be confirmed in writing by the Contracting Officer. In no instance will the COTR be delegated authority to order any change in the contractor's performance which would affect (a) cost or schedule for contracts for services or supplies, or (b) scope, the completion date for intermediate phases or milestones, or overall completion date for contracts for construction.

(End of clause)

FAR 52.211-12 LIQUIDATED DAMAGES (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of **(\$85.00)** for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

AOC52.211-5 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (SEP 2004)

(a) All work to be performed under this contract shall be completed within 60 calendar days

after the date of contract award. No work under this contract shall be performed on Saturdays, Sundays or Federal holidays and, for work performed in the District of Columbia, Presidential Inauguration Day, except with prior approval of the Contracting Officer.

(b) Time for completion of the contract work will be adjusted only in accordance with applicable clauses in the GENERAL CONDITIONS (e.g., "Differing Site Conditions", "Changes", "Changes - Supplement", "Suspension of Work").

(End of clause)

AOC52.223-5 SPECIAL SECURITY REQUIREMENTS - SERVICES (MAR 2006)

(a) All vehicles, and contents, used by the Contractor or his subcontractors, which enter or leave United States Government property during performance of the work, will be subject to clearance, inspection and identification procedures conducted by the United States Capitol Police. See the attachment entitled "U.S. CAPITOL POLICE NOTICE" for instructions prior to delivery.

(b) All persons entering the Legislative Branch Buildings shall gain access to the building by passing through x-ray screening devices. In addition, all handbags and all hand-carried items shall be screened by x-ray devices prior to their entry into the building.

(c) All personnel provided by the Contractor and employed on the site of the work will be subject to a security background investigation. Each employee will be required to fill out an I.D. Request Form and U.S. Capitol Police Request for check of Criminal History Records and each employee will be photographed and fingerprinted. The Contractor shall provide any assistance required by any of its employees in completing the forms.

(d) Prior to commencement of work, the contractor and all designated on-site employees will be required, on a one-time basis, to be fingerprinted in Washington D.C. The location for the Electronic Fingerprinting Service is the U.S. Capitol Hill Police, Fairchild Building, 499 South Capitol Street SW, Washington, DC 20003.

(e) Within seven (7) calendar days after the date of contract award, the Contractor shall submit to the Contracting Officer's Technical Representative (COTR) a list of all employees proposed to be employed on this contract. This list shall include the employee's full name, date of birth and social security number.

(f) While security background investigations are in process, the Contractor's employees must not be granted access to the Capitol Hill complex to perform work or provide services for the AOC unless they are escorted by an AOC staff member. "Escorted" is defined to mean that the AOC staff member will remain with the employee(s) **at all times** during the performance of the

work. Any of the Contractor's employees who are perceived by the Contracting Officer as a security risk as a result of evidence discovered in the background security investigation, will not be issued an Identification Card, will be denied access to the site of the work, and the Contractor will be directed to remove such employee from performance of any of the contract work, whether it be on or off the work site. Any contractor employee denied access to the site of work on a contract or task/delivery order as a result of a security investigation may not apply for access to any other AOC/U.S. Supreme Court contract or task/delivery order work site.

(g) An identification card, with photograph, will be prepared for each employee of the Contractor requiring access to the site. The identification card shall be dated to indicate the period of time for which it is to remain valid - from the date the employee reports for duty until the applicable date which occurs first: the expiration of the contract, or the last date of the employee's tour of duty with the Contractor. All contractor personnel must wear the ID badge whenever on the Capitol complex premises or when attending off-site functions on behalf of the AOC. ID badges must be worn in such a manner that contractor personnel can be easily identified as such.

(h) All persons entering the Legislative Branch Buildings shall gain access to the building by passing through a magnetometer. In addition, all handbags and all hand-carried items shall be screened by x-ray devices prior to their entry into the building.

(I) The Contractor is fully responsible to return:

(1) The ID badge of any individual employee, including subcontractor personnel, who is removed for any reason including but not limited to illness, or dismissal;

(2) The ID badges of all contractor employees, including subcontractor personnel, whose performance under the contract is completed in advance of final contract job completion; and

(3) All outstanding ID badges issued for the contractor and its employees, including subcontractor personnel, within 24 hours of on site contract job completion.

(j) ID badges are to be hand delivered by the contractor within 24 hours of any of the events listed under (f) above to the Contracting Officer's Representative.

(End of clause)

AOC52.223-8 DELIVERY VEHICLE INSPECTION REQUIREMENTS (MAR 2006)

(a) All vehicles and contents used by the Contractor or his subcontractors which enter or

leave United States Government property during performance of work under this contract will be subject to clearance, inspection, and identification procedures conducted by the United States Capitol Police.

(b) *Mobile Vehicle and Cargo Inspection System (Mobile VACIS).* All delivery vehicles carrying fuel, garbage, or similar cargo that cannot be offloaded for inspection and security screening shall utilize the Mobile VACIS located at Third and Pennsylvania Avenue, NW, Washington, DC, for inspection prior to making deliveries to any building within the Capitol Complex, including, but not limited to, the U.S. Capitol Building; the U.S. Botanic Garden; the Hart, Dirksen, and Russell Senate Office Buildings; the Rayburn, Longworth, Cannon, and Ford House Office Buildings; the Thomas Jefferson, John Adams, and James Madison Memorial Library of Congress buildings; the Capitol Power Plant; the Capitol Visitors Center; and the U.S. Supreme Court and Thurgood Marshall Federal Judiciary Buildings.

(1) For deliveries requiring Mobile VACIS inspection, within seven calendar days or prior to the first delivery, the contractor shall provide the following information to the U.S. Capitol Police:

- (I) List of drivers;
- (ii) Date of birth for each driver;
- (iii) Social Security Number of each driver;
- (iv) Vehicle make;
- (v) Vehicle model;
- (vi) License tag number and state where vehicle is licensed;
- (vii) Color of vehicle; and
- (viii) Contractor name, if shown on the vehicle.

(2) Information for deliveries made through the Mobile VACIS unit must be faxed to (202) 228-4313. For verification of receipt, the contractor may call (202) 224-9728.

(3) Updates to the above information for Mobile VACIS deliveries must be sent to the U.S. Capitol Police throughout the period of performance of the contract.

(c) *4700 Shepherd Parkway SW inspection facility.* All other vehicles making deliveries to the above listed locations except for the Thomas Jefferson, John Adams, and James Madison

Memorial Library of Congress buildings and the U.S. Supreme Court shall utilize the off-site inspection and screening facilities at 4700 Shepherd Parkway SW, Washington DC 20032.

(End of clause)

1. CONTRACT TIME (AOC) (NOV 2003)

(a) Contractor shall have (90) calendar days to complete all work to be performed under this contract. Contractor shall perform all work during third shift hours Monday through Thursday, 4 p.m. to 12 a.m. (All work, base bid and options, must be done during Third Shift on Mondays through Thursdays) to complete the work on Option 01 and 02 should take 60 work days. An in-depth description of these submittals can be found in the appropriate technical sections of the specification. Any Schedule of Work prepared shall reflect delivery of these items. Failure to provide timely delivery of these submittals may be considered to be grounds for termination for default.

(b) Time for completion of the contract work will be adjusted only in accordance with applicable articles in the GENERAL CONDITIONS (e.g., "Differing Site Conditions", "Changes", "Suspension of Work").

(End of clause)

AOC52.236-11 SUBMITTALS (JUN 2004)

(a) The Contractor shall deliver all required submittals within the times specified elsewhere in this contract. Unless specifically stated otherwise, four (4) sets of each item shall be delivered by the contractor to the Contracting Officer's Technical Representative. An in-depth description of these submittals can be found in the appropriate technical sections of the specification. Any Schedule of Work prepared shall reflect delivery of these items. Failure to provide timely delivery of these submittals may be considered to be grounds for termination for default.

(b) The Government will review the submittals and either approve them as submitted, or mark required changes on them. If changes are required, the Contractor shall deliver revised submittals for approval by the Government which incorporate all of the required changes within two weeks after receipt by the Contractor of the marked-up submittals.

(End of clause)

END OF SUPPLEMENTARY CONDITIONS

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**REPRESENTATIONS, CERTIFICATIONS,
AND OTHER STATEMENTS OF OFFERORS**

FAR 52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that -

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to -

(I) Those prices;

(ii) The intention to submit an offer; or

(iii) The methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory -

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this provision; or

(2)(I) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this provision

[insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or per position in the offeror's organization];

(ii) As an authorized agent, does certify that the principals named in

subdivision (b)(2)(I) of this provision have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this provision; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this provision.

©) If the offeror deletes or modifies paragraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of provision)

FAR 52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) *Definitions.* "Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701©) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

©) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701©)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) *Taxpayer Identification Number (TIN).*

_____ TIN: _____.

_____ TIN has been applied for.

_____ TIN is not required because:

_____ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

_____ Offeror is an agency or instrumentality of a foreign government;

_____ Offeror is an agency or instrumentality of a Federal government;

(e) *Type of organization.*

_____ Sole proprietorship;

_____ Partnership;

_____ Corporate entity (not tax-exempt);

_____ Corporate entity (tax-exempt);

_____ Government entity (Federal, State, or local);

_____ Foreign government

_____ International organization per 26 CFR 1.6049-4;

_____ Other _____

(f) *Common Parent.*

_____ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

_____ Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

AOC52.204-2 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (JUN 2004)

(a) The offeror shall enter, in the space provided below, the DUNS number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services.

(b) If the offeror does not have a DUNS number, it should contract Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

- (1) Company name,
- (2) Company address;
- (3) Company telephone number;
- (4) Line of business;
- (5) Chief executive officer/key manager;
- (6) Date the company was started;
- (7) Number of people employed by the company; and
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet home page at <http://www.customerservice@dnb.com>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@mail.dnb.com.

(d) Enter DUNS number: _____.

(End of provision)

AOC52.204-3 REPRESENTATIONS AND CERTIFICATIONS (NOV 2004)

The offeror shall properly execute and submit with its offer the Representations and Certifications contained herein. Insert information in spaces provided as applicable.

(End of provision)

AOC52.215-8 AUTHORIZED NEGOTIATORS (JUN 2004)

The offeror represents that following persons are authorized to negotiate on its behalf with the Government in connection with this Request for Proposal:

_____ <u>Name</u>	_____ <u>Title</u>
<u>Telephone:</u> _____	<u>E-Mail:</u> _____
<hr/> <hr/>	

_____ Name	_____ Title
Telephone: _____	E-Mail: _____
<hr/> <hr/>	

_____ Name	_____ Title
Telephone: _____	E-Mail: _____
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(End of provision)

END OF REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF
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SOLICITATION CONDITIONS

FAR 52.211-6 BRAND NAME OR EQUAL (AUG 1999)

(a) If an item in this solicitation is identified as “brand name or equal,” the purchase description reflects the characteristics and level of quality that will satisfy the Government’s needs. The salient physical, functional, or performance characteristics that “equal” products must meet are specified in the solicitation.

(b) To be considered for award, offers of “equal” products, including “equal” products of the brand name manufacturer, must–

(1) Meet the salient physical, functional, or performance characteristic specified in this solicitation;

(2) Clearly identify the item by–

(I) Brand name, if any; and

(ii) Make or model number;

(3) Include descriptive literature such as illustrations, drawings, or a clear reference to previously furnished descriptive data or information available to the Contracting Officer; and

(4) Clearly describe any modifications the offeror plans to make in a product to make it conform to the solicitation requirements. Mark any descriptive material to clearly show the modifications.

©) The Contracting Officer will evaluate “equal” products on the basis of information furnished by the offeror or identified in the offer and reasonable available to the Contracting Officer. The Contracting Officer is not responsible for locating or obtaining any information not identified in the offer.

(d) Unless the offeror clearly indicates in its offer that the product being offered is an “equal” product, the offeror shall provide the brand name product referenced in the solicitation.

(End of provision)

AOC52.215-1 INSTRUCTIONS TO OFFERORS (FEB 2005)

(a) *Definitions.* As used in this provision --

“Proposal modification” is a change made to a proposal before the solicitation’s closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time,” if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays, including Presidential Inauguration Day. However, if the last day falls on a Saturday, Sunday, or legal holiday, including Presidential Inauguration Day, then the period shall include the next working day.

(b) Offerors are expected to examine the entire solicitation and all instructions. Failure to do so will be at the offeror’s risk. Each offeror shall furnish the information required by the solicitation. The offeror will be held responsible for full knowledge of all information contained therein.

©) *Packaging, transmission, and tracking of proposals.* (1) Proposals, modifications, and revisions shall be enclosed, in the quantities specified elsewhere in this solicitation, in sealed envelopes. With each copy of the form entitled “SOLICITATION, OFFER, AND AWARD (Construction, Alteration, or Repair)”, enclose the completed Schedule page, Bid Guarantee, if required, and Representations and Certifications. Address envelopes to: Architect of the Capitol, Procurement Division, Ford House Office Building, Attn: Shola Matthews-Aroloye, Room H2-263 Bid Room, Second and “D” Streets, S.W., Washington, DC 20515. Offeror shall place the OF-17, Offer Label, on the exterior of the package on the same side as the address, or write “Bid Documents Enclosed”, “H2-263 Bid Room”, and write the solicitation number, time and date for receipt of offers on the exterior of the package on the same side as the address. Telegraphic or facsimile proposals and modifications will not be considered.

(2) Current security requirements established by the U.S. Capitol Police to screen mail being delivered to the U.S. Capitol Complex of buildings preclude the use of U. S. Postal Service by offerors to deliver their proposals submitted in response to this solicitation. In addition, because all packages must be screened for security purposes at a central location prior to their delivery, the Architect of the Capitol cannot accept packages containing offers hand carried directly to the Bid Room address within the Ford House Office Building, or any other location in the U.S. Capitol Complex of buildings. **See “Notice for Delivery” on the front of the solicitation.**

(3) To assist in tracking of proposals, offerors are requested to fax a copy of their signed “Solicitation, Offer and Award” form as well as a copy of the FEDEX or UPS receipt to Shola Matthews-Aroloye to (202) 225-3221 at the time of the issuance of their proposal.

(4) The only acceptable method by which offerors can deliver their responses to this solicitation shall be via Federal Express (FEDEX) or United Parcel Service (UPS). Offers submitted via any other method will be rejected. **OFFERORS - DO NOT MAIL YOUR OFFER BY REGULAR U.S. MAIL.** See notice attached to this solicitation for special instructions.

(d) *Submission, modification, revision, and withdrawal of proposals.* (1) Offerors are responsible for submitting proposals and any modifications or revisions so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m. local time, for the designated

Government office on the date that the proposal or revision is due. For the purposes of determining timeliness, the designated Government office is defined as the Pitney Bowes Management Services Capitol Heights Mail Facility at 9140 East Hampton Drive, Capitol Heights, Maryland 20743.

(2) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is “late” and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition, and-

(I) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals;

(ii) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government’s control prior to the time set for receipt of proposals; or

(iii) It is the only proposal received.

(3) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(4) Acceptable evidence to establish the date of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(5) If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of proposals by the exact time specified in the solicitation and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(6) Proposals may be withdrawn by written notice received at any time before award. Proposals may be withdrawn in person by an offeror or an authorized representative if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(End of provision)

AOC52.215-2 INTERPRETATIONS AND AMENDMENTS (JUN 2004)

(a) Any prospective offeror desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing no later than fourteen calendar days prior to the date established for receipt of offers. Oral explanations or instructions given before the award of a contract will not be binding.

(b) Prospective offerors shall request the Contracting Officer, in writing, via FAX or e-mail for an interpretation or correction of any ambiguity, inconsistency, or error in the contract documents which they may discover or which should have been discovered by a reasonably prudent offeror. Such requests or objections to materials or methods of construction shown or specified shall be directed to the attention of the Contracting Officer at least ten (10) calendar days prior to the date specified for receipt of proposals. Written requests shall be transmitted via e-mail to smatthew@aoc.gov or via facsimile to (866) 221-4163.

(c) Any interpretations or corrections, as well as any additional modifications the Contracting Officer may desire to include, will be in the form of amendments, in writing, which will be sent on the same date to all offerors if that information is necessary in submitting offers or if the lack of it would be prejudicial to other prospective offerors and shall become a part of any subsequent contract. The Contracting Officer reserves the right to answer only such questions as have, in his opinion, a definite bearing upon the proposals to be submitted.

(1) Offerors shall acknowledge the receipt of all amendments to the solicitation by:

(i) Signing and returning the amendment;

(ii) Identifying the amendment number and date in the space provided for this purpose on the form for submitting a offer;

(iii) Letter or telegram; or

(iv) Facsimile, if facsimile offers are authorized in the solicitation.

(2) The Government must receive the acknowledgment by the time and at the place specified for receipt of offers.

(d) Requests for oral interpretations or any other interpretations not made by amendments will not be accepted, and any information that may possibly be gained by offerors in that manner is gratuitous and not binding.

(e) If this solicitation is amended, all terms and conditions that are not amended remain unchanged.

(End of provision)

AOC52.215-3 RESTRICTION ON DISCLOSURE AND USE OF DATA (JUN 2004)

Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall—

- (a) Mark the title page with the following legend:
“This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with--the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government’s right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets (insert numbers or other identification of sheets)”;
- (b) Mark each sheet of data it wishes to restrict with the following legend:
“Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.”

(End of provision)

AOC52.215-4 CONTRACT AWARD (JUN 2004)

- (a) The Government will evaluate offers in response to this solicitation without discussions and will award a contract to the responsible offeror whose offer, conforming to the solicitation, will be most advantageous to the Government considering only price and the price-related factors specified elsewhere in the solicitation. Therefore, the offeror’s initial proposal should contain the offeror’s best terms from a price standpoint. The Government reserves the right to conduct discussions.
- (b) The Government may—
 - (1) Reject any or all offers;
 - (2) Accept other than the lowest offer; and
 - (3) Waive informalities or minor irregularities in offers received.
- (c) The Government may accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the solicitation or the offer.
- (d) A written award or acceptance of offer mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer shall result in a binding contract without

further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer as provided in Paragraph ©) of this clause), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award. Negotiations conducted after receipt of an offer do not constitute a rejection or counteroffer by the Government.

(e) Neither financial data submitted with an offer, nor representations concerning facilities or financing, will form a part of the resulting contract. However, if the resulting contract contains a clause providing for price reduction for defective cost or pricing data, the contract price will be subject to reduction if cost or pricing data furnished is incomplete, inaccurate, or not current.

(f) The Government may determine that an offer is unacceptable if the prices proposed are materially unbalanced between line items or sub line items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(End of provision)

AOC52.215-7 PREPARATION OF PROPOSALS - CONSTRUCTION (JUN 2004)

(a) Offers shall be submitted, in the quantities as stated elsewhere in this solicitation, on the accompanying printed form entitled, "SOLICITATION, OFFER, AND AWARD (Construction, Alteration, or Repair)" and copies thereof, with blank spaces suitably filled in. Erasures or other changes on any or all submissions shall be initialed by the signer of the offer.

(b) Copies of the offer shall be identical and each copy shall give the full business address of the offeror, and be signed by him (see Block 20B of the form entitled, "SOLICITATION, OFFER, AND AWARD (Construction, Alteration, or Repair)") with his usual signature. Offer by partnerships shall furnish the full names of all partners, and shall be signed with the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and designation of the person signing. Offers by corporations shall be signed with the legal name of the corporation, followed by the name of the State of incorporation and by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The name of each person signing shall be typed or printed below the signature. An offer by a person who affixes to his signature the word "president", "Secretary", "agent", or other designation, without disclosing his principal, may be held to be the offer of the individual signing. When requested by the Government, satisfactory evidence of the authority of the offer signing in behalf of the corporation shall be furnished.

(End of provision)

AOC52.215-9 FAILURE TO SUBMIT OFFER (JUN 2004)

Recipients of this solicitation not responding with a proposal should not return this solicitation, unless it specifies otherwise. Instead, they should advise the issuing office by letter, postcard, or established electronic commerce methods, whether they want to receive future solicitations for similar requirements. If a recipient does not submit a proposal and does not notify the issuing office that future solicitations are desired, the recipient's name **will** be removed from the applicable mailing list.

(End of provision)

FAR 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm-fixed-price contract resulting from this solicitation.

(End of provision)

EVALUATION OF OPTION(S)

.1 Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interest, the Government will evaluate offers for award purposes by adding the total extended price for the selected options which include Line Item 004 and 005 to the total price which includes the lump sum price for the Base Period(s) Line Item 001 through 003. The resultant sum is designated, and will be referred to as, the Total Price.

.2 Evaluation of Option(s) will not obligate the Government to exercise the Option(s).

.3 The Government may reject a offer as nonresponsive if it is materially unbalanced as to prices for the Base Period and the Option(s) quantities. A offer is unbalanced when it is based on prices significantly less than cost for some work, and prices which are significantly overstated for other work.

FAR 52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2002)

(a) *Definitions.* "Construction material", "domestic construction material", and "foreign construction material", as used in this provision, are defined in the clause of this solicitation entitled "Buy American Act - Construction Materials (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) *Requests for determination of inapplicability.* An offeror requesting a determination of inapplicability of the Buy American Act should submit the request to the Contracting officer in time to allow a determination before submission of offers. The offeror shall include the information and

applicable supporting data required by paragraphs ©) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer or has not received a response to a previous request, the offeror shall include the information and supporting data on the offeror.

(c) *Evaluation of offers.* (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(I) of the clause at FAR 52.225-9.

(2) If the evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable costs.

(d) *Alternate offers.* (1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror may also submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer and a separate price comparison table prepared in accordance with paragraphs ©) and (d) of the clause at 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph ©) of the clause at 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(I) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

AOC52.228-1 OFFER GUARANTEE (JUN 2004)

(a) Failure to furnish an Offer Guarantee in the required form and amount, with and as a part of the proposal, will be cause for rejection of the proposal.

(b) The offeror shall furnish an Offer Guarantee of not less than 20% of the proposed price in

the form of a firm commitment consisting of a Bid Bond, Certified Check, Cashier's Check, Irrevocable Letter of Credit, or Postal Money Order made payable to the Architect of the Capitol, or, under Treasury Department Regulations, certain bonds or notes of the United States. The Contracting Officer will return Offer Guarantees, other than Bid Bonds, (1) to unsuccessful offerors as soon as practicable after evaluation of the proposals; and (2) to the successful offeror upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the offer as accepted.

(End of provision)

AOC52.236-13 VISIT TO THE SITE OF THE WORK - CONSTRUCTION (JUN 2004)

(a) It is strongly recommended that all prospective offerors visit the site where the work is to be performed, compare the work requirements with existing conditions, verify dimensions, if necessary, and fully inform themselves regarding the nature and scope of the proposed work and the conditions under which it will be conducted. Offerors shall also inform themselves regarding other work, if any, being done or to be done by or for the United States government, the District of Columbia government and utility companies, by contract or otherwise, where such work may affect or be affected by the operations under the contract. Failure to take these precautions will in no way relieve the successful offeror from his obligation to furnish all materials, services, labor, and any other requirements necessary to complete the work satisfactorily under the conditions established by the contract documents and without additional expense to the Government.

(b) A pre-proposal meeting will be conducted at the U.S. Botanic Garden D.C. Village 4700 Shepherd Parkway, S.W., Washington, D.C. 20032 for all prospective offerors on June 8, 2006 at 10:00 a.m, Eastern Time.

(c) The Architect will conduct one field inspection of the work immediately following the pre-proposal meeting. Those intending to participate shall meet at the address above. Information concerning the meeting may be obtained by telephoning Shola Matthews-Aroloye at (202) 226-0641.

(d) Offerors are encouraged to submit all questions in writing at least five (5) working days prior to the conference. Questions will be considered at any time prior to or during the conference; however, offerors will be asked to confirm verbal questions in writing. Subsequent to the conference, an amendment to the solicitation containing an abstract of the questions and answers, and a list of attendees, will be disseminated.

(e) Offerors are cautioned that, notwithstanding any remarks or clarifications given at any site visit, the pre-proposal conference or field inspection, all terms and conditions of the solicitation remain unchanged unless they are changed by amendment to the solicitation. If the answers to conference questions, or any solicitation amendment, create ambiguities, it is the responsibility of the offeror to seek clarification prior to submitting a offer.

(End of provision)

INSTRUCTIONS FOR PREPARING THE PRICE PROPOSAL -

(a) A firm fixed-price shall be entered by each offeror on the Schedule page for each line item (line item pricing, options, and unit prices) which shall represent the cost for performing the work required by this Request for Proposal. The Architect reserves the right to request from each offeror information regarding the breakdown of all costs that are included in the lump sum price (Line Item Nos. 001 through 005), to include copies of all work sheets used in forming the proposed pricing. Erasures or other changes on any or all submissions shall be initialed by the signer of the proposal or by his duly authorized agent.

(b) The Price Proposal shall be submitted with the following required documents in the order shown below:

- (1) “SOLICITATION, OFFER, AND AWARD” form (original signature required in Block 20B);
- (2) The “SCHEDULE” page;
- (3) the “REPRESENTATIONS AND CERTIFICATIONS”; and
- (4) the “BID GUARANTEE”.

END OF SOLICITATION CONDITIONS

VOLUME I I

TECHNICAL

PART 1 - GENERAL**1.1 DRAWING TITLES:**

- (a) The drawings entitled “Botanical Gardens, D.C. Village Fire Alarm system Upgrade , AOC Project Number 000235” prepared by Alan M. Hantman, FAIA, Architect of the Capitol, dated March 24, 2006, as listed below from a part of the Contract Documents.
- (b) The Contractor shall not scale the drawings but shall verify drawing dimensions and take additionally required dimensions at the site.
- (c) The Contractor will be furnished, free of charge, not more than six (6) sets of the contract drawings.

PART 2 - DRAWINGS LIST**2.1 GENERAL**

Number	Title
FA001	Title Sheet / Cover Page

(List by Number and full title all GENERAL drawings)

2.2 CIVIL

Number		Title
FA002	-	General Notes, Symbols & Abbreviation
FA101	-	Headhouse Basement Floor Plan
FA102	-	Headhouse First Floor Plan
FA103	-	Greenhouse Roof Plan
FA104	-	Greenhouse Tunnel Plan
FA105	-	Riser Diagram
FA106	-	Project Wiring Diagrams

(List by Number and full title all CIVIL drawings)

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SECTION 01000 -GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS:

- A. General Requirements: The provisions or requirements of Division-1 apply to entire work of Contract and, where so indicated, to other elements which are included in project, and include, but are not limited to the following:

1. Summary of the Work.
2. Project Coordination.
3. Definitions and Standards.
4. Schedules and Reports.
5. Submittals.
6. Temporary Facilities and Controls.
7. Products.
8. Project Closeout.

1.2 SUMMARY OF THE WORK:

- A. Project/Work Identification:

1. General: Project name is "Fire Alarm System Upgrade of Botanic Gardens at D.C. Village", as shown on Contract Documents prepared by the Architect of the Capitol (Architect). The Architect includes the Architect of the Capitol or any Architect representative. Drawings and specifications are dated March 24, 2006.
2. Summary by Reference: Work of the Contract can be summarized by references to the SCHEDULE, GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, Official Procedure for Making Changes in Contracts, Specification Sections, Drawings, Amendments and Modifications to the contract documents issued subsequent to the initial printing of this Project Manual and including, but not necessarily limited to, printed material referenced by any of these.
3. Abbreviated Written Summary: Briefly and without force and effect upon the contract documents, the work of the Contract can be summarized as follows:
 - a. The work includes but is not limited to a complete replacement of the fire alarm system in the Headhouse and Greenhouses of Botanic Gardens at D.C. Village.
 - b. The work includes the demolition of all existing fire alarm systems.
 - c. The work includes the restoration of all surfaces and building equipment impacted by the demolition of the existing fire alarm system.
 - d. Bid Option #1 - To provide complete linear heat detection in the green house.
 - e. Bid Option #2 - To provide complete voice system intelligibility throughout the entire complex.

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4. Use of the Contract Documents: The Contract Documents are comprised of the Drawings, the Specifications, the Amendments, the Contract, approved Change Orders and other directives. These documents are not to be used separately for bid or construction as they represent the entirety of the project. The Contractor is responsible for insuring that the documents are used together.
5. Phasing Plan: No Phasing Plan is included in the Contract Documents. The Contractor is expected to complete all work sequentially to provide the minimum disruption of parking and normal building operations in the area. The Contractor will provide his own plan for approval by Architect showing proposed sequencing of the work and coordination with Government parking requirements.

B. Contractor Use of Premises:

1. General: The Contractor shall limit his use of the premises to the work indicated, so as to allow for the Government's occupancy and use by the public.
2. Contractor Use of the Existing Building: During the construction period the site and the building will be occupied by Members of Congress, other Government employees and the general public. Maintain the existing building in a safe and weather-tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period. Cooperate fully with Architect or his representative during construction operations to minimize conflicts and to facilitate Government usage.
 - a. Clear Passage: Keep public areas such as hallways, stairs, elevator lobbies and toilet rooms free from accumulation of waste material, rubbish or construction debris.
 - b. Smoking or open fires will not be permitted within the building enclosure or on the premises.
 - c. Temporary Elevator Use: The Architect will designate elevators available for use of Contractor's personnel. Use of other than designated elevators will not be permitted.
3. Limitations on Use of the Site: Limitations on site usage as well as specific requirements that impact site utilization are indicated on the Drawings and by other Contract Documents. Portions of the site beyond areas on which work is indicated are not to be disturbed. In addition to these limitations and requirements, administer allocation of available space among entities needing both access and space so as to produce the best overall efficiency in performance of the total work of the project. Schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site.
 - a. Unless designated for sole Contractor use, keep existing driveways and entrances serving the premises clear and available to the Government and its employees at all times. Do not permit trucks of any kind to use existing sidewalks without prior authorization of the Architect.

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- b. Maintain driveways between and around combustible material storage piles at least 15' wide and free of accumulation of rubbish, equipment and materials. Maintain access for fire fighting equipment.
 - c. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary, obtain and pay for such storage off-site.
 - d. Provide 24hr/7day access to the building by emergency vehicles and firefighting equipment.
- 4. Construction Parking Control: Parking space for personal vehicles will be designated by the facility.
- C. Government Occupancy: The Government reserves the right to place and install equipment as necessary in completed areas of the building and to occupy such areas prior to final acceptance, provided that such occupancy does not substantially interfere with completion of the work. Such placing of equipment and partial occupancy shall not constitute acceptance of the work or any part of the work.
- D. Protection of Government Property: The Contractor is expected to take all reasonable precautions to protect U.S. Government Property. In the event of damage to or theft of Government Property, the Contractor will be held fully responsible for his own personnel, his subcontractor's personnel and their actions.
- E. Blasting: The use of any kind or type of explosive in the performance of the work is prohibited, except the use of construction tools actuated by or employing powder-actuated charges which shall be permitted, provided that the tool is of the kind and design ordinarily used for such construction and that the Architect has authorized its use after determining that its use will not endanger human life or safety.
- F. Mechanical/Electrical Requirements of General Work: Except as otherwise indicated, comply with applicable provisions of The National Electrical Code (NEC) and standards by National Electrical Manufacturer's Association (NEMA) for electrical components of general work. Where applicable, provide products listed and labeled by nationally recognized independent testing and labeling organizations.

1.3 PROJECT COORDINATION:

- A. Coordination and Meetings: Prepare a written memorandum on required coordination activities. Include such items as required notices, reports and attendance at meetings. Distribute this memorandum to each entity performing work at the project site. Prepare similar memorandum for separate contractors where interfacing of their work is required.
 - 1. Continuously coordinate the work of subcontractors to ensure proper processing and progress of the work. Require each subcontractor to examine work of other trades and all sections of specifications to assure satisfactory installation of, and connection between, his work and work of other trades.

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2. The Contractor shall maintain a complete set of Contract Documents on the site during the execution of this contract. All Drawings and Specifications shall be posted with the latest information and Change Orders.
- B. Surveys and Records/Reports: Drawings shall not be scaled to determine dimensions. Contractor shall base the location of devices based on his survey.
- C. General Installation Provisions:
1. Pre-Installation Meetings: Hold a pre-installation meeting at the project site well before installation of each unit of work which requires coordination with other work. Installer and representatives of the manufacturers and fabricators who are involved in or affected by that unit of work, and with its coordination or integration with other work that has preceded or will follow, shall attend this meeting. Advise Architect of scheduled meeting dates.
 2. Installer's Inspection of Conditions: Require the Installer of each major unit of work to inspect the substrate to receive work and conditions under which the work is to be performed. The Installer shall report all unsatisfactory conditions in writing to the Contractor. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.
 3. Manufacturer's Instructions: Where installations include manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation, to the extent that these instructions and recommendations are more explicit or more stringent than requirements indicated in the Contract Documents.
 4. Mounting Heights: Where mounting heights are not indicated, mount individual units of work at industry recognized standard mounting heights for the particular application indicated. Refer questionable mounting height choices to the Architect for final decision.
 - a. Mount units of work required to be accessible to handicapped people at heights prescribed by the Uniform Federal Accessibility Standards as referenced by the Americans with Disabilities Act (ADA) (Fed. Reg./Vol. 56, No. 144/Part 36).
- D. Cleaning and Protection: During handling and installation of work at the project site, clean and protect work in progress and adjoining work on the basis of continuous maintenance. Apply protective covering on installed work where it is required to ensure freedom from damage or deterioration at time of completion.
1. Clean and perform maintenance on installed work as frequently as necessary through remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
 2. Limiting Exposures of Work: To the extent possible through reasonable control and protection methods, supervise performance of the work in such a manner and by such means which will ensure that none of the work, whether completed or in

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progress, will be subjected to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period.

- a. Protect against possible damage all sills, jambs and soffits of permanent openings used as passageways or through which materials are handled. Protect exposed corners, spandrels, projecting features and similar permanent work subject to damage. Cover and protect all prefinished work from damage by mortar, plaster, gypsum drywall compounds, paint, and other construction materials and operations. Use wheelbarrows equipped with rubber tires over permanently exposed floors and paving. Provide special protection for works of art, as prescribed in the Contract Documents.
 3. Load all trucks leaving the site with earthen materials or loose debris in a manner that will prevent dropping of materials on streets. Fasten suitable tarpaulins over the load before they enter surrounding paved streets. Trucks bringing earthen materials over paved streets to the site shall be similarly covered.
 4. Clean sidewalks and streets adjacent to site daily or more often as necessary, of debris spillage or mud/dirt tracked from loading and trucking involved in construction operations. Maintain suitable truck wheel washing installation and crew to prevent any mud from being carried onto adjacent paved streets. Conform to local regulations regarding load limits.
- E. Cutting and Patching: Where the Contractor must cut, patch, alter, add to, repair or refinish existing construction and finishes which are not to be removed, he shall leave such construction and finishes complete and in satisfactory condition. Cutting, patching, and the like shall be neatly and carefully performed, and new materials and methods shall match existing corresponding work unless otherwise indicated. Exposed patches and repairs shall be as inconspicuous as possible.
1. Construction, finishes, equipment and other items which are damaged or defaced by reason of work performed under this contract shall be restored to the satisfaction of the Architect.
- F. Conservation and Salvage: It is a requirement for supervision and administration of the work that construction operations be carried out with the maximum possible consideration given to the conservation of energy, water and materials. In addition, maximum consideration shall be given to salvaging materials and equipment involved in performance of the work but not incorporated therein. Refer to other sections for required disposition of salvage materials which are the Government's property.
1. Architect Notification: To allow time for the Architect to observe the construction, provide a minimum of 48 hours notice of excavation work, completion of steel reinforcing, pouring of concrete, paving operations, utility work, trenching, tree removal or replacement, commencements of next phase of work, and other tasks to be identified by the Architect.

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1.4 DEFINITIONS AND STANDARDS:

- A. General: Comply with governing regulations and the codes and standards imposed upon the work. These requirements include the obtaining of permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards.
- B. Definitions: A substantial amount of specification language consists of definitions for terms found in other contract documents, including the drawings. (Drawings must be recognized as diagrammatic in nature and not completely descriptive of the requirements indicated thereon). Certain terms used in contract documents are defined in this article. Definitions and explanations contained in this section are not necessarily either complete or exclusive, but are general for the work to the extent that they are not stated more explicitly in another element of the contract documents.
 - 1. Installer: The term "installer" is defined as the entity (person or firm) engaged by the Contractor, its subcontractor or sub-subcontractor for performance of a particular unit of work at the project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (installers) be expert in the operations they are engaged to perform.
 - 2. Testing Laboratory: The term "testing laboratory" is defined as an independent entity engaged to perform specific inspections or tests of the work, either at the project site or elsewhere, and to report, and (if required) interpret results of those inspections or tests.
 - 3. Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for the purpose of helping the reader locate cross-reference, and no limitation is intended except as specifically noted.
 - 4. Furnish: Except as otherwise defined in greater detail, the term "furnish" is used to mean supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
 - 5. Install: Except as otherwise defined in greater detail, the term "install" is used to describe operations at the project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.
 - 6. Provide: Except as otherwise defined in greater detail, the term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
 - 7. Exposed: The term "exposed" is defined as an item or surface, exterior or interior, which can be seen by a person outside the building or a person inside a usable space within the building during normal activity.

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- a. Mechanical and electrical rooms, air handling rooms, storage rooms and penthouses shall be considered to have exposed surfaces, as shall the mechanical and electrical construction within them.
 - b. The interiors of closets and alcoves shall be considered exposed surfaces, and shall be finished to match the finish of the adjoining room or space, unless another finish is otherwise indicated.
 - c. The interiors of cabinets shall be considered exposed, but a finish different from that of the exterior may be permitted or required by other sections.
 8. Concealed: The term "concealed" is defined as an item or space not normally seen, occupied or used by building occupants or staff, such as shafts, hoistways, tunnels, ceiling plenums, attics, and crawls spaces.
 9. Finished Space: The term "finished space" is defined as space normally used by the public, building occupants or staff for primary functions of the building, but does not include mechanical, electrical and elevator equipment rooms, hoistways, tunnels or mechanical penthouses, unless otherwise indicated.
 10. Specialist: The term "specialist" is defined as an individual or firm of established reputation (or, if newly organized, whose personnel have previously established a reputation in the same field), which is regularly engaged in, and which maintains a regular force of workers skilled in either (as applicable) manufacturing or fabricating items required by the contract, installing items required by the contract, or otherwise performing work required by the contract. Where the contract specification requires installation by a specialist, that term shall also be deemed to mean either the manufacturer of the item, an individual or firm licensed by the manufacturer, or an individual or firm who will perform the work under the manufacturer's direct supervision.
- C. Format and Specification Content Explanations: Bolding and underscoring: Are used strictly to assist reader of specification text in scanning text for key words (for quick recall). No emphasis on or relative importance is intended where bolding and underscoring are used. Imperative language is used generally in specifications. Except as otherwise indicated, requirements expressed imperatively are to be performed by the Contractor. For clarity of reading at certain locations, contrasting subjective language is used to describe responsibilities which must be fulfilled indirectly by Contractor, or when so noted, by others.
1. Abbreviations: The language of specifications and other contract documents is of the abbreviated type in certain instances, and implies words and meanings which will be appropriately interpreted. Actual word abbreviations of a self-explanatory nature have been included in texts. Specific abbreviations have been established, principally for lengthy technical terminology and primarily in conjunction with coordination of specification requirements with titles of general standards which are frequently abbreviated. Singular words will be interpreted as plural and plural words will be interpreted as singular where applicable and where full context of the contract documents so indicates.

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2. Minimum Quality/Quantity: In every instance, the quality level or quantity shown or specified is intended as minimum for the work to be performed or provided. Except as otherwise specifically indicated, actual work may either comply exactly with that minimum (within specified tolerances), or may surpass the quality of that minimum within reasonable limits. In complying with requirements, indicated numeric values are either minimum or maximums as noted or as appropriate for context of requirements. Refer instances of uncertainty to the Architect for decision before proceeding.
- D. Overlapping and Conflicting Requirements: Where there appears to be overlapping or conflicting requirements in the drawings and specifications, refer all such questions in writing to the Architect for interpretation. Do not proceed with that portion of the work that is under question until the Architect has replied in writing. Delays necessitated by requests for interpretation shall not form the basis for a Change Order. The Architect's interpretation and decision shall be final. Procedures for resolving disagreements with the decision of the Architect are outlined in the General Conditions of the Contract. The order of precedence is established as follows:
1. Order of Precedence: Any inconsistency in this solicitation or Contract shall be resolved by giving precedence in the following order:
 - a. The Schedule (excluding the specifications).
 - b. Representations and other instructions.
 - c. Contract clauses.
 - d. The Specifications.
 - e. The Drawings. Large scale drawings take precedence over small scale drawings. Do not scale drawings.
 2. Industry Standards: Where compliance with two (2) or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, the most stringent requirement is intended and will be enforced, unless specifically detailed language written into contract documents clearly indicates that a less stringent requirement is to be fulfilled. Refer apparently-equal-but-different requirements, and uncertainties as to which level of quality is more stringent, to the Architect for a decision before proceeding.
 3. Contractor's Options: Except for overlapping or conflicting requirements, where more than one set of requirements are specified for a particular unit of work, Options are intended to be the Contractor's regardless of whether or not it is specifically indicated as such.
- E. Drawing Symbols: Except as otherwise indicated, graphic symbols used on drawings are those symbols recognized in the construction industry for purposes indicated. Where not otherwise noted, symbols are defined by "Architectural Graphic Standards", published by John Wiley & Sons, Inc., Ninth edition.
1. Mechanical/Electrical Drawings: Graphic symbols used on mechanical and electrical drawings are generally aligned with symbols recommended by ASHRAE.

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Where appropriate, these symbols are supplemented by more specific symbols as recommended by other recognized technical associations including ASME, ASPE, IEEE and similar organizations. Refer instances of uncertainty to the Architect for clarification before proceeding.

F. Industry Standards: Except to the extent that more explicit or more stringent requirements are written directly into contract documents, applicable standards of the construction industry have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies were bound herein, subject to the order of precedence previously stated.

1. Publication Dates: Except as otherwise indicated, where compliance with an industry standard is required, conform to the standard in effect on the date of the Invitation for Bids, or, if referred to in any Addenda, at the date of such addenda.
2. Abbreviations and Names: The following acronyms or abbreviations as referenced in contract documents are defined to mean the associated names. Both names and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of the date of contract documents:

AIA	American Institute of Architects 1735 New York Ave., NW Washington, DC 20006	(800) AIA-3857
ANSI	American National Standards Institute 1819 L. Street, NW Washington, DC 20036	(202) 293-8020
ASTM	American Society for Testing and Materials 100 Bar Harbor Drive West Conshohocken, PA 19428-2959	(610) 832-9585
AWS	American Welding Society 550 Northwest 42 nd Ave. Miami, FL 33126	(305) 443-9353
FM	Factory Mutual Research Organization 1151 Providence Highway Norwood, MA 02062	(781) 762-4300
IEEE	Institute of Electrical and Electronic Engineers 1828 L Street, NW - Suite 102 Washington, DC 20036-5104	(202) 785-0017
NAAMM	National Association of Architectural Metal Manufacturers 8 South Michigan Avenue Chicago, IL 60603	(312) 332-0405

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NEC	National Electrical Code (from NFPA)	
NECA	National Electrical Contractors Assoc. 3 Bethesda Metro Center Bethesda, MD 20814	(301) 657-3110
NEII	National Elevator Industry, Inc. 400 Frank W. Burr Blvd. Teaneck, NJ 07666	(201) 928-2828
NEMA	National Electrical Manufacturers Assoc. 1500 North 17 th Street Rosslyn, VA 22209	(703) 841-3200
NFPA	National Fire Protection Assoc. One Batterymarch Park P.O. Box 9101 Quincy, MA 02269-9101	(617) 770-3000
NRCA	National Roofing Contractors Assoc. 10255 W. Higgins Rd., Suite 600 Rosemont, IL 60018-5607	(847) 299-9070
SMACNA	Sheet Metal and Air Conditioning Contractors National Association 4201 Lafayette Center Dr. Chantilly, VA 20151-1209	(703) 803-2980
SSPC	The Society for Protective Coatings 40 24 th St. - 6 th Floor Pittsburgh, PA 15222-4656	(877) 281-7772 (412) 281-2331
UL	Underwriters Laboratories, Inc. 333 Pfingsten Rd. Northbrook, IL 60062-2096	(847) 272-8800
WSFI	Wood and Synthetic Flooring Institute 4415 W. Harrison St., Suite 242-C Hillside, IL 60162	(708) 449-2933
WWPA	Western Wood Products Assoc. 522 SW 5th Avenue - Suite 500 Portland, OR 97204-2122	(503) 224-3930
W.W.P.A.	Woven Wire Products Assoc. 20690 Horse Hame Hollow Estero, FL 33928	(914) 948-9019

G. Federal Government Agencies: Names and titles of federal government Standard- or Specification-producing agencies are often abbreviated. The following acronyms or

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abbreviations referenced in the Contract Documents indicate names of Standard- or Specification-producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up to date as of the date of the Contract Documents.

CFR	Code of Federal Regulations (Available from the Government Printing Office) N. Capitol St. between G and H St. NW Washington, DC 20402 (Material is usually first published in the "Federal Register")	(202) 783-3238
CPSC	Consumer Product Safety Commission 5401 Westbard Ave. Bethesda, MD 20207	(301) 492-6580 or (800) 638-2772
EPA	Environmental Protection Agency 401 M St., SW Washington, DC 20460	(202) 382-2090

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FS	Federal Specification (from GSA) Specifications Unit (WFSIS) 7th and D St., SW Washington, DC 20407	(202) 708-9205
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor) N3647 200 Constitution Ave., NW Washington, DC 20210	(202) 219-8148

1.5 SCHEDULES & REPORTS:

- A. Coordination: Coordinate both the listing and timing of reports and other activities required by provisions of this and other sections, so as to provide consistency and logical coordination between the reports. Maintain coordination and correlation between separate reports by updating at monthly or shorter time intervals. Make appropriate distribution of each report and updated report to all parties involved in the work including the Architect.
- B. Material Schedule: Prior to commencing work, submit for approval the names of manufacturers and the trade names or numbers of all materials proposed for use on the project. Do not use any material until approved by the Architect. Upon request, furnish samples of materials, without cost to the Government, for examination and testing.
 - 1. Submit 3 copies of the product-listing schedule prior to commencement of the Work. Provide a written explanation for omissions of data, and for known variations from contract requirements.
- C. Schedule of Values: Within thirty (30) calendar days of the date of contract award, a Schedule of Values shall be submitted. This schedule is defined as a work item by work item breakdown of cost of each definitive work activity including Contractor's markup. The Schedule of Values shall directly correlate with the Phases of Work indicated on the approved Progress Schedule specified below.
 - 1. The Grand Total of all of the Schedules shall equal Contractor's original bid.
 - 2. The proper updating of both the Schedule of Values and the Record Drawings shall be considered precedent to approval of Partial Payments.
- D. Shop Drawing Submittal Schedule: Within thirty (30) calendar days of the date of contract award, a Shop Drawing Submittal Schedule shall be submitted. The schedule shall indicate at a minimum, all shop drawing submittals to be made, their contents, each specification section the submittal is drawn from, the date on which it will be submitted, the expected return dates, and the subcontractor responsible for creating the submittal. The submittal will be reviewed by the Architect as the first shop drawing submittal and comments made must be acknowledged and employed in the resubmission prior to the submittal of any other shop drawing. Do not "Load" the schedule. Shop drawings shall follow NFPA 72 and are required to be approved by the AOC Fire Marshal.

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- E. Progress Schedule: Within fourteen (14) calendar days of the date of contract award, the Contractor shall prepare and submit for approval a schedule showing the order in which he proposes to perform the Work, the dates on which he will start each phase of work and the contemplated dates of completion for each phase of site. Not less than six (6) copies of this schedule shall be submitted to the Architect.
- F. Progress Meetings and Documentation: In addition to specific coordination and pre-installation meetings for each element of work, and other regular project meetings held for other purposes, hold a general progress meeting each month with time coordinated with preparation of the partial payment request. Require each entity then involved in planning, coordination or performance of work to be properly represented at each meeting. Discuss status of each element of current work in relation to Progress Schedule. Determine how behind-schedule work will be expedited, and secure commitments from entities involved in doing so to ensure that work will be completed within Contract Time.
 - 1. Initial Progress Meeting: Schedule initial progress meeting, recognized as "Pre-Construction Meeting", for a date not more than 15 days after date of commencement of the Work. Use it as an organizational meeting, and review responsibilities and personnel assignments.
 - 2. Daily Reports: Prepare a daily report, recording information concerning events at the site; and submit duplicate copies to Architect on at least weekly intervals.
- G. Permits, Licenses, and Certificates: For the Government's records, submit copies of utility permits, licenses, certifications, utility inspection reports, releases, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

1.6 SUBMITTALS:

- A. General: Shop drawings, product data, samples and other work-related submittals are required to amplify, expand and coordinate the information contained in the Contract Documents. The Contractor is responsible for all dimensions, for the design of adequate or proper components, connections and other items, for the inclusion in the work of all elements and incidental details, and for the satisfactory fabrication, construction, operation and coordination of the work.
 - 1. Approval of any submission shall not be construed as a complete or precise check of the item submitted but will only indicate that the general methods of design, detailing, construction or other elements under consideration appear to be satisfactory, without specific determinations or particulars.
 - 2. Changes to the Contract will not be made by notations on submittals. In the event submittals returned by the Architect with notations, which in the opinion of the Contractor, constitute additional work for which he is entitled to an adjustment in the contract sum or the contract time, the Contractor shall comply with the procedure set forth in Article, "Changes," of the GENERAL CONDITIONS.

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3. Do not permit submittal copies without an appropriate final "Action" marking by the Architect to be used in connection with the work.
 4. Submissions of "Approved Equals:" In addition to standard submittal requirements, for each item submitted as an "approved equal" submit the following:
 - a. Comparison of proposed approved equal's characteristics with the salient characteristics of the specified product demonstrating that the proposed approved equal fully meets or exceeds the specifications,
 - b. Drawings and samples as required for specified products,
 - c. Any changes required in other elements (if any) because of the submission of the proposed approved equal, and
 - d. A listing of sources of supply, maintenance service (if applicable), and replacement parts.
- B. Submittal Procedures: Make all submittals to the Architect or to an individual designated by the Architect.
1. Only the Architect or an individual designated by the Architect can approve or disapprove submittals. Deviations and variations from the contract requirements contained in the submittal can be approved only by the Architect or by an individual delegated such authority by the Architect.
 2. Costs associated with transmittal of submittals shall be borne by the Contractor.
 3. Review Time: Except as specified elsewhere, allow for a review period of thirty (30) calendar days after receipt of the submittals by the Architect. Advise the Architect on each submittal, as to whether processing time is critical to the progress of the work, and if work would be expedited if processing time could be shortened. No extension of time will be authorized because of the Contractor's failure to transmit submittals or re-submittals to the Architect sufficiently in advance of the work. For submittals of items requiring coordination between different trades or subcontractors, review time period starts from the time that all required submittals have been received by the Architect and ends when submittal leaves the Architect. The Contractor is required to coordinate all work involving associated sub-trades and produce coordinated drawings for submittal where required by individual specification sections or as required below.
 4. Preparation of Submittals: Provide permanent marking on each submittal to identify project, date, Contractor, subcontractor, supplier, manufacturer, submittal name and similar information to distinguish it from other submittals. Label as to number and title of specification section, drawing number and detail references, as appropriate. Show Contractor's executed review and approval marking and provide space of not less than 20 sq. in. for the Architect's "Action" marking. Package each submittal appropriately for transmittal and handling. Submittals which are received from sources other than through the Contractor's office will be returned without action.
 5. Number of Copies: Submit a minimum of six (6) copies of each submittal requested.

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- C. Specific Submittal Requirements: Specific submittal requirements for individual units of work are specified in the applicable specification section. Except as otherwise indicated in the individual specification sections, comply with the requirements specified herein for each type of transmittal.
1. Product Data: Collect required product data into a single submittal for each unit of work or system. Mark each copy to show which choices and options are applicable to the project. Where product data has been printed to include information on several similar products, some of which are not required for use on the project, or are not included in this submittal, mark the copies to show clearly that such information is not applicable.
 - a. Submittals: Submittal is for information and record, unless otherwise indicated. Initial submittal is final submittal unless returned by the Architect, marked with an action which indicates an observed non-compliance.
 - 1) Initial Submittal: Except as otherwise indicated, submit six (6) copies of each required product data submittal, plus two (2) additional copies where required for maintenance manuals. The Architect will retain two (2) copies and return the others marked with "Action" and corrections or modifications as required.
 2. Shop Drawings: Provide special notation of dimensions that have been established by field measurement. Highlight, encircle or otherwise indicate deviations from the Contract Documents on the shop drawings.
 - a. Preparation: Submit newly prepared information, drawn to accurate scale on sheets 30" x 42". Indicate the name of the firm that prepared each shop drawing and provide appropriate project identification in the title block.
 - 1) Do not reproduce contract documents or copy standard printed information as the basis of shop drawings.
 - 2) Use standard architectural scales for all drawings..
 - b. Coordination Drawings: Prior to installation of sleeves and inserts for equipment, and/or the performance of work in spaces in which two or more trades are involved and in which the probability of interference exists as determined by either the Contractor or the Architect, submit composite coordination drawings for the Work. Show sequencing and relationship of separate units of work which must interface in a restricted manner to fit in the space provided, or function as indicated. In case interference develops, the Architect will decide which work shall be relocated, regardless of which was installed first. Coordination drawings are considered shop drawings and must be definitive in nature.
 - c. Equipment and Systems: Shop Drawings for equipment and systems shall show ratings (where applicable), and how components are assembled, function together, and how they will be installed. Shop drawings, product

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data, certificate of conformance or compliance, certified test or inspection reports, and other submittals for equipment, systems, and their component parts shall be coordinated and submitted as a unit. Multiple or piecemeal submissions are not acceptable except where prior approval is obtained from the Architect, in which case a list of data to be submitted later shall be included with the first submission.

- d. Initial Submittal: One correctable 1-1/2 mil translucent polyester reproducible print and one blue-line or black-line; reproducible will be returned.
- e. Final Submittal: 6 prints, plus 2 additional prints where required for maintenance manuals; 4 will be retained and remainder will be returned, one of which is to be marked-up and maintained by Contractor as "Record Document."

3. Miscellaneous Submittals:

- a. Inspection and Test Reports: Classify each inspection and test report as being either "shop drawings" or "product data" depending on whether the report is specially prepared for the project, or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.
- b. Warranties: Refer to Article "Products" for specific general requirements on warranties, product bonds, workmanship bonds and maintenance agreements. In addition to copies desired for the Contractor's use, furnish 2 executed copies of such warranties, bonds or agreements. Provide 2 additional copies where required for maintenance manuals.
- c. Staging Plan: The Architect will indicate where the Contractor can stage the construction. Submit a Staging Plan indicating specific locations of the superintendent's trailer, storage and loading of materials, traffic direction and control concept and signage, security perimeter for staging area, locations of informational construction signage, locations of temporary toilets and other temporary construction, emergency facilities and resources and any other construction facilities required.

4. Closeout Submittals: Refer to Article "Project Closeout" and to individual sections of these specifications for specific submittal requirements of project closeout information, materials, tools, and similar items.

D. Architect's Action: Except for submittals for the record and similar purposes, where action and return on submittals is required or requested, the Architect will review each submittal and mark with appropriate "Action." Where the submittal must be held for coordination, the Architect will so advise the Contractor without delay.

- 1. If no changes to the drawing are required, three (3) prints and the reproducible drawing will be returned to the Contractor, bearing the stamp of the Architect, stating - "APPROVED."

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2. If changes to the drawing are required, but are of such minor nature that fabrication and/or construction can proceed in accordance with the correction noted by the Architect without resubmission of the drawing three (3) prints and the reproducible drawing will be returned to the Contractor bearing the Stamp of the Architect stating "Approved as Noted." The Contractor shall proceed with fabrication and/or construction in accordance with the Architect's corrections, and resubmit corrected copy for the Architect's records.
3. If changes to the drawing are required, but are of such nature that fabrication or construction cannot proceed, three (3) prints and the reproducible drawing will be returned to the Contractor, bearing the stamp of the Architect stating - "Revise and Resubmit." In such a case, the Contractor shall resubmit the drawings, properly corrected. Upon resubmission of shop drawings, if any corrections or changes are made other than those marked by the Architect, the Contractor shall clearly indicate any such corrections or changes made on his own initiative.
4. If the product does not meet the specification requirements, the number of copies outlined above will be returned to the Contractor, bearing the stamp of the Architect stating - "REJECTED." In such a case, the Contractor shall submit a new product which complies with the technical specifications.
5. Other Action: Where the submittal is returned, marked with the Architect's explanation, for special processing or other Contractor activity, or is primarily for information or record purposes, the submittal will be marked as follows:
 - a. Not Subject to Review: This review category will apply to submittals which are not required by the Contract Documents and are inadvertently submitted and stamped; or
 - b. Received/No Action Required: This category will be used when returning "Informational Submittals" for which the Architect is not required to take action.

1.7 TEMPORARY FACILITIES AND CONTROLS:

- A. Description of Requirements: This article specifies administrative and procedural requirements for temporary services and facilities, including such items as temporary construction and support facilities, and project security and protection.
 1. Use Charges: No cost or usage charges for temporary services or facilities are chargeable to the Government. Cost or use charges for temporary services or facilities will not be accepted as a basis of claims for a change-order extra. All materials and equipment provided by the Contractor for temporary facilities shall remain the property of the Contractor.
 2. Materials and Execution: Provide new materials and equipment for temporary services and facilities; used materials and equipment that are undamaged and in serviceable condition may be used, if acceptable to the Architect. Provide only materials and equipment that are recognized as being suitable for the intended use,

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by compliance with appropriate standards. Do not use materials of temporary service in permanent installation.

- B. Quality Assurance: Comply with the requirements of the District of Columbia Building Code and regulations governing construction and local industry standards, in the installation and maintenance of temporary services and facilities.
 - 1. Standards: Comply with the requirements of NFPA Code 241, "Building Construction and Demolition Operations", the ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and the NECA National Joint Guideline NJC-6 "Temporary Job Utilities and Services".
 - a. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", as prepared jointly by Associated General Contractors of America (AGC) and American Specialty Contractors, Inc. (ASC) for industry recommendations.
 - b. Trade Jurisdictions: The assigned responsibilities for the installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdictions applicable to the work.
- C. Temporary Utilities: The Architect will designate a connection point for installation of temporary service to the project to existing service. Arrange with the Architect for an acceptable time when service can be interrupted, where necessary to make connections for temporary services. Coordinate with House Superintendent's office for installation of temporary service.
 - 1. Temporary Telephones: Contractor shall coordinate temporary telephone service for project (i.e., via cell phone service or temporary service through the local telephone company) with the Architect Project Manager and House Superintendent.
 - 2. Temporary Sanitary Facilities: Sanitary facilities include temporary toilets, wash facilities and drinking water fixtures. Use of the designated existing Government toilet facilities, will be permitted, provided these facilities are properly cleaned and maintained in a condition acceptable to the Government. Immediately prior to Final Acceptance, restore these facilities to the condition prevalent at the time of initial use. Do not clean tools or equipment in building toilet rooms.
- D. Temporary Construction and Support Facilities:
 - 1. Field Offices and Sheds: Provide a reasonably neat and uniform appearance in temporary construction and support facilities acceptable to the Architect. For temporary offices, fabrication shops, storage sheds and similar construction, provide either standard prefabricated or mobile units or the equivalent job-built

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construction. Provide support facilities that can be maintained properly throughout their use at the project site.

- a. Provide fire-resistant construction for offices, shops, and sheds located within the construction work area, or within 50 feet of building lines.
 - b. Locate field offices, storage and fabrication sheds and other support facilities for easy access to the Work within the allocated staging area so that facilities will not block required exits or firemen's access to the building.
 - c. Maintain field offices, storage and fabrication sheds, temporary sanitary facilities, waste collection and disposal systems, and project identification and temporary signs until near final acceptance. Immediately prior to final acceptance, with the Architect's approval, remove these facilities.
 2. Field Offices: Contractor to coordinate temporary field offices of sufficient size to accommodate required office personnel and project meetings at the project site with the Architect Project Manager and House Superintendent.
 3. Project Signage: No signs, other than safety signs, may be erected on the site unless specifically indicated otherwise.
- E. Security and Protection Facilities: Provide and maintain all necessary barricades, lights, and other safeguards for the protection Government employees, and Contractor's employees. Protect materials and work on the site, whether incorporated in the work or not, against damage or loss from any cause.
1. Provide a reasonably neat and uniform appearance in security and protection facilities acceptable to the Architect.
- F. Temporary Controls:
1. Traffic Control: Plan vehicular access methods, locations and timing of deliveries in a manner to minimize interference with street and pedestrian traffic and to conform to District of Columbia regulations. Do not block or obstruct public streets, driveways and walkways adjacent to the site at any time during performance of the work without proper authorization. Do not permit trucks of any kind to use existing sidewalks without prior authorization of the Architect.
 2. Collection and Disposal of Wastes: Establish a system for daily collection and disposal of waste materials from construction areas and elsewhere on the site. Enforce requirements strictly. Do not hold collected materials at the site longer than 7 days during normal weather or 3 days when the daily temperature is expected to rise above 80 deg. F (27 deg. C). Handle waste materials that are hazardous, dangerous, or unsanitary separately from other inert waste by containerizing appropriately. Dispose of waste material in a lawful manner.
 - a. Burying or burning of waste materials on the site will not be permitted.

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- b. Washing waste materials down sewers or into waterways will not be permitted.
 - c. Provide rodent proof containers located on each floor level of construction work, to encourage depositing of garbage and similar wastes by construction personnel.
 - 3. Janitorial Services: Provide daily janitorial services for temporary offices, first aid stations, toilets, wash facilities, lunchrooms and similar areas. Require users of other temporary facilities to help maintain a clean and orderly premises.
 - 4. Dust Control: During periods of construction activity creating dust conditions sprinkle periodically the site areas disturbed by Contractor's operation or treat with dust suppressors to control dust. Construct enclosures adequate to prevent dust dispersion into adjacent areas and/or ductwork. Dry power brooming will not be permitted. Use vacuuming, wet mopping, wet sweeping or wet power brooming. Air blowing will be permitted only for cleaning non-particulate debris. Use only wet cutting procedures for unit masonry and concrete.
 - 5. Noise Control: Avoid the use of tools and equipment that produce harmful noise. Restrict the use of noise making tools and equipment to hours of use that will minimize noise complaints from persons or firms near the project site.
 - 6. Environmental Protection: Provide general protection facilities, operate temporary facilities, conduct construction activities, and enforce strict discipline for personnel on the site in ways and methods that comply with environmental regulations, and that minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result from the performance of work at the site.
- G. Installation, Operation, Termination and Removal: Use qualified tradesmen for installation of temporary services and facilities. Locate temporary services and facilities where they will serve the entire project adequately and result in minimum interference with the performance of the Work.
- 1. Supervision: Limit availability of temporary services and facilities to essential and intended uses to minimize waste and abuse. Do not permit temporary installations to be abused or endangered. Do not allow hazardous, dangerous or unsanitary conditions to develop or persist on the project site.
 - 2. Maintenance: Operate and maintain temporary services and facilities in good operating condition throughout the time of use and until removal is authorized.
 - 3. Termination and Removal: Unless the Architect requests that it be maintained for a longer period of time, remove each temporary service and facility promptly when the need for it or a substantial portion of it has ended, or when it has been replaced by the authorized use of a permanent facility, or no later than substantial completion. Repair damaged work, clean exposed surfaces and replace work which cannot be satisfactorily repaired. Contract time includes the time required for final cleanup of premises.

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- a. Immediately prior to final acceptance, clean and renovate permanent services and facilities that have been used to provide temporary services and facilities during the construction period.
- b. Restoration of Site and Adjacent Areas : Restore the site and the adjacent areas used for staging, traffic, protection and storage of materials to their conditions prior to start of work. This includes, but is not limited to all site improvements, signage, lighting, street furniture, paving, sprinkler systems, utilities, plant, trees and turf materials. Procedures which may be required include de-compaction of compacted soils, addition of soil amendments, aeration, re-grading and removal of contaminated materials or other procedures as may be necessary.

1.8 PRODUCTS:

- A. General: Refer to clause, "Materials and Workmanship," of the GENERAL CONDITIONS. After execution of the Contract, the Contractor's requests for changes in the products, materials, equipment and methods of construction required by the Contract Documents are considered requests for "contract modifications," and are subject to the requirements specified in Architect, "Official Procedure for Making Changes in Contracts." Revisions to the contract documents, where requested by the Architect are considered as "changes" not substitutions.
- B. Quality Assurance: Compatibility of products is a basic requirement of product selection. When the Contractor is given the option of selecting between two or more products for use on the project, the product selected must be compatible with other products previously selected, even if the products previously selected were also Contractor options. The complete compatibility between various choices available to the Contractor is not assured by the various requirements of the Contract Documents, but must be provided by the Contractor. Provide a single product for each required product selection, regardless of whether that product selection is provided by more than one sub-contractor. Do not alter product brands or series for a given product selection during the life of the contract without written approval of the Architect.
 1. Source Limitations: To the fullest extent possible and subject to the restrictions of the "Buy American Act," provide products of the same generic kind, from a single source, for each unit of work.
- C. Product Delivery, Storage, and Handling: Deliver, store, and handle products in accordance with manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft. Control delivery schedules to minimize long-term storage at the site and to prevent overcrowding of construction spaces, and to ensure minimum holding or storage times for items known or recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration or loss.
 1. Deliver products to the site in the manufacturer's sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, ventilating, and installing.

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2. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units, and in conformance with manufacturer's instructions. Maintain ready access to Manufacturers Material Safety Data Sheets (MSDS) for each material.
 3. Store heavy materials away from the project structure in a manner that will not endanger the supporting construction.
- D. General Product Compliance: Requirements for individual products are indicated in the Contract Documents; compliance with these requirements is in itself a contract requirement. These requirements may be specified in any one of several different specifying methods, or in any combination of these methods.
1. Procedures for Selecting Products: The Contractor's options in selecting products are limited by requirements of the Contract Documents and governing regulations. They are not controlled by industry traditions or procedures experienced by the Contractor on previous construction projects.
 - a. Performance Specification Requirements: Where the specifications require compliance with indicated performance requirements, provide products that comply with the specific performance requirements indicated, and that are recommended by the manufacturer for the application indicated. The manufacturer's recommendations may be contained in published product literature, or by the manufacturer's individual certification of performance. General overall performance of a product is implied where the product is specified for specific performances.
 - b. Compliance with Standards, Codes and Regulations: Where the specifications require only compliance with an imposed standard, code or regulation, the Contractor has the option of selecting a product that complies with specification requirements, including the standards, codes and regulations.
- E. General Product Requirements: Provide products that comply with the requirements of the contract documents and that are undamaged and, unless otherwise indicated, unused at the time of installation. Provide products that are complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
1. Provide products that are essentially the standard catalogued products of manufacturers regularly engaged in production of such products and that are the manufacturer's latest standard design that complies with the specification requirements. Equipment shall essentially duplicate items that have been in satisfactory commercial and industrial use at least two years, or more if otherwise specified, prior to bid opening; or in lieu thereof shall have been used and operated in a test installation which, in the opinion of the Architect, duplicate its field performance for the same period of time. The Architect reserves the right to require the Contractor to submit evidence to this effect for his approval. When two units of the same class of equipment are required, these units shall be the product of a

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single manufacturer; however, the component parts of the system need not be the products of the same manufacturer.

2. Provide standard, domestically produced products for which the manufacturer has published assurances that the products and its parts are likely to be available to the Government at a later date.
 3. Nameplates: Except as otherwise indicated for required labels and operating data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on the exterior of the completed project.
- F. Installation of Products: Except as otherwise indicated in individual sections of these specifications, comply with the manufacturer's instructions and recommendations for installation of the products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work. Clean exposed surfaces and protect surfaces as necessary to ensure freedom from damage and deterioration at time of acceptance.

1.9 PROJECT CLOSEOUT:

- A. Definitions: "Project Closeout" is the term used to describe certain collective project requirements, indicating completion of the work that are to be fulfilled near the end of the Contract Time in preparation for final acceptance and occupancy of the Work by the Government, as well as final payment to the Contractor and the normal termination of the Contract.
1. Time of closeout is directly related to "Final Acceptance." Therefore, the time of closeout may be either a single time period for the entire Work or a series of time periods for individual elements of the Work that have been certified as substantially complete at different dates. This time variation, if any, shall be applicable to the other provisions of this Division.
- B. Final Cleaning: Special cleaning requirements for specific units of Work are included in the appropriate sections of Division 2 through 16. General Cleaning during the regular progress of the Work is required by the GENERAL CONDITIONS and is included under Article "Temporary Facilities and Controls".
1. Cleaning: Provide final cleaning of the Work at the time indicated. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of work to the condition expected from a normal, commercial building cleaning and maintenance program. Comply with the manufacturer's instructions for operations.
 - a. Complete the following cleaning operations before requesting the Architect's inspection for Final Acceptance.
 - b. Remove labels which are not required as permanent labels.
 - c. Clean transparent materials, including mirrors and glass in doors and windows, to a polished condition. Remove putty and other substances

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- which are noticeable as vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
- d. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of dust, stains, films and similar noticeable distracting substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - e. Wipe surfaces of mechanical and electrical equipment clean. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - f. Clean the project site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas to a broom clean condition; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
2. Compliance: Comply with safety standards and governing regulations for cleaning operations. Remove waste materials from the site and dispose of in a lawful manner.
- a. Where extra materials of value remaining after completion of associated work have become the Government's property, salvage or dispose of these materials to the Government's best advantage as directed.
- C. Record Document Submittals: Specific requirements for record documents are indicated in the individual sections of these specifications. Other requirements are indicated in the GENERAL CONDITIONS. General submittal requirements are indicated in the various "Submittals" articles of individual sections of the Project Manual.
- 1. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.
 - 2. Record Documents: Maintain a record set of blue or black line white-prints of contract drawings and shop drawings in a clean, undamaged condition. Mark-up the set of record documents to show the actual installation where the installed work varies substantially from the work as originally shown. Mark whichever drawing is most capable of showing the actual "field" condition ("as-built" condition) fully and accurately; however, where shop drawings are used for mark-up, record a cross-reference at the corresponding location on the working drawings. Give particular attention to concealed work that would be difficult to measure and record at a later date.
 - a. Mark record sets with red erasable pencil and, where feasible, use other colors to distinguish between variations in separate categories of work.
 - b. Note related change-order numbers where applicable.
 - c. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

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- d. Materials and Tools: Refer to individual sections of the Project Manual for required quantities of spare parts, extra and overrun stock, maintenance tools and devices, keys, and similar physical units to be submitted.
- D. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind data into individual binders properly identified and indexed. Bind each set of data in a heavy-duty 2-inch, 3-ring vinyl-covered binder, with pocket folders for folded sheet information. Mark the appropriate identification on both front and spine of each binder. Another Operations and Maintenance manual shall be provided to the Fire Marshal.
- E. Warranties and Bonds: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
 - a. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
 - b. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS," the Project title or name, project number, and the name of the Contractor.
 - 2. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.
- F. General Operating and Maintenance Instructions: Arrange for each installer of operating equipment and other work that requires regular or continuing maintenance, to meet at the site with the Government's personnel to provide necessary basic instruction in the proper operation and maintenance of the entire Work. Where installers are not experienced in the required procedures, include instruction by the manufacturer's representatives.
- G. Closeout Submittals: Prior to requesting Final Inspection, submit the following:
 - 1. Project Record Documents, properly annotated and in the format required.
 - 2. Copies of Warranties and Bonds.
 - 3. Operation and Maintenance data.
 - 4. All required operating or special tools required in individual sections.
 - 5. All required keys and keying schedules.

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- H. Prerequisites to Final Acceptance: Complete the following before requesting the Architect's final inspection for certification of final acceptance, and final payment as required by the GENERAL CONDITIONS. List known exceptions, if any, in the request.
1. Submit the final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit a certified copy of the Architect's final punch-list of itemized work identified to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by the Architect.
 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data either as of the date of substantial completion, or else when the Government took possession of and responsibility for corresponding elements of the Work.
 5. Submit consent of surety.
- I. Reinspection Procedures: The Architect will reinspect the Work upon receipt of the Contractor's notice that the work, including punchlist items resulting from earlier inspections, has been completed, except for these items whose completion has been delayed because of circumstances that are acceptable to the Architect.
- J. Removal of Protection: Except as otherwise indicated or requested by the Architect, remove temporary protection devices and facilities which were installed during the course of the work to protect previously completed work during the remainder of the construction period.

-END OF SECTION 01000-

SECTION 01546 - SAFETY AND HEALTH

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK:

- A. **General:** This section, general in nature, is applicable to all work performed under this contract and identifies some of the precautions necessary to protect the safety and health of employees, visitors, occupants and contract employees, and to prevent the loss of or damage to property and the environment.
1. Note the Construction Contractor submittal requirements outlined in Part 1 paragraph "Submittals" of this Section.
- B. **Related Work:** The following sections, located elsewhere in this Project Manual, indicate the scope of work and specific measures to control hazardous materials/conditions:
1. Division 1 Sections "GENERAL REQUIREMENTS"
 2. Division 1 Sections "CUTTING AND PATCHING"
 3. Division 7 Sections "FIRE STOPPING"
 4. Division 13 Sections "FIRE ALARM SYSTEM"
 5. Division 16 Sections "ELECTRICAL GENERAL REQUIREMENTS"
 6. Division 16 Sections "INTERIOR WIRING REQUIREMENTS"

1.2 REFERENCES:

- A. **General:** The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. Exclusion of any specific regulations/standards required by Federal and/or local codes does not relieve the Contractor of their legal and contractual obligations to adhere to such requirements.
- B. **National Standards / Code of Federal Regulations (CFRs):**
1. 29 CFR 1910 - OSHA Occupational Safety and Health Standards.
 2. 29 CFR 1926 - OSHA Safety and Health Regulations for Construction.
 3. 40 CFR Parts 700-799, Subchapter R - Toxic Substance Control Act (TSCA).
 4. 40 CFR Parts 50-99, Air Programs.
 5. 40 CFR Parts 260-299, Hazardous Waste Management System (radionuclides).
 6. 40 CFR Part 761 - Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
 7. 40 CFR Parts 104-140 and 401-471, Water Programs.
 8. DOT Manual of Uniform Traffic Control Devices.
 8. Americans with Disabilities Act (ADA), current with updates.
- C. **Related Building and System Codes:**
1. International Building Code (IBC).
 2. International Existing Building Code (IEBC).
 3. Life Safety Code - NFPA 101.

4. National Fire Alarm Code - NFPA 72.
5. International Electrical Code; and related NEMA, NECA, and UL Standards.
6. International Mechanical Code.
7. International Plumbing Code.

D. **Federal Standard 313A - Material Safety Data Sheets, Preparation and Submission.**

E. **Related** District of Columbia, state, and local regulations shall apply.

1.3 **DEFINITION OF HAZARDOUS MATERIALS:**

- A. **General:** Refer to hazardous and toxic materials/substances, Subparts H and Z of 29 CFR 1910 and related parts of 29 CFR 1926; 40 CFR 261; and to others as defined in Federal Standard 313.
- B. **Those hazardous materials** most commonly encountered can include pesticides, cleaning agents, paints, adhesives, strippers, solvents, asbestos, polychlorinated biphenyls (PCB's), mercury vapor lamps, but may include others. Any unlabeled substance should be handled as hazardous material until properly identified.
- C. **All suspect asbestos containing materials** (e.g., boiler insulation, duct insulation, pipe insulation), surfacing materials (i.e., plaster and sprayed-on fireproofing) and miscellaneous materials (i.e., asphalt flooring, ceiling tiles, adhesives and mastics, drywall, roofing, gaskets and cement board), must be considered asbestos containing unless proven otherwise in accordance with 29 CFR 1926.1101.
- D. **Pre-1978 Surfaces:** All finished/painted surfaces of buildings constructed prior to 1978 shall be considered finished with lead based paint unless proven otherwise.
- E. **Products likely to contain PCB's** include electrical transformers, capacitors, voltage regulators, oil switches, and some fluorescent light ballasts. Transformer vaults with PCB contaminated floors are identified by signage at the entry door (refer to Part 3 of this Section, article "Cautionary Procedures at Existing Vaults").
- F. **Products likely to include mercury** include fluorescent light tubes, switches, gauges, thermostats, and older thermometers.

1.4 **QUALITY ASSURANCE:**

- A. **Pre-Construction Safety Meeting:** Representatives of the Contractor must meet with the Contracting Officer and his/her representative(s) prior to the start of work under this contract. The purpose of the pre-construction meeting is to review the Contractor's Safety and Health Program and Policies, and to discuss the implementation of all safety and health provisions pertinent to the work to be performed under the contract. The Contractor shall be prepared to discuss, in detail, the measures he/she intends to take in controlling any unsafe or unhealthy conditions associated with the work to be performed under the contract. If directed by the Contracting Officer, this meeting may be held in conjunction with other pre-construction meetings such as the General Pre-Construction meeting. The level of detail of the safety meeting is dependent upon the nature of the work and the potential inherent hazards. The Contractor's principal on-site representative(s), the general superintendent and his/her safety

- representative(s) shall be in attendance.
- B. **Compliance With Regulations:** All work, including contact with the handling of hazardous or regulated materials, the disturbance or dismantling of structures containing hazardous or regulated materials, and/or the transport and disposal of hazardous or regulated materials shall comply with the applicable requirements of 29 CFR 1910/1926, 40 CFR, 49 CFR, and all other applicable federal, state, and local regulations.
 - C. **Construction Site Lighting:** Lighting intensity levels for construction areas shall meet the minimum requirements established by 29 CFR 1926.56: Illumination, including *Table D-3 - Minimum Illumination Intensities in Foot-Candles*.
 - D. **Compliance/Conflicts:** All work shall comply with applicable Federal, state and local safety and health requirements. Where there is a conflict between applicable regulations, the most stringent shall take precedence.
 - E. **Contractor Responsibility:** All Contractors shall assume full responsibility and liability for compliance with applicable regulations pertaining to the health and safety of personnel during the execution of work, and shall hold the Government harmless for any action on his/her part, or that of his/her employees or subcontractors, which results in illness, injury or death. The Contractor shall designate a single point-of-contact who is authorized to act on behalf of the contracting firm, authorized to take immediate corrective actions, and assigned the task of daily inspections and reporting outlined herein. Construction Contractors shall comply with the following additional requirements in accordance with 29 CFR 1926.16 (Prime/Subs):
 - 1. Compliance with the accepted Accident Prevention Plan written by the prime Contractor for the specific work, submitted to the government, and reviewed by the COTR. The Contractor's plan will be job specific and will include work to be performed by the subcontractors, and measures to be taken by the Contractor to control hazards associated with materials, services, or equipment provided by suppliers.
 - 2. Regularly scheduled safety meetings shall be held at least once a week for all supervisors on the project to review past activities, to plan ahead for new or changed operations, and to establish safe working procedures for the anticipated hazards. An outline of each meeting shall be submitted through the COTR to the Contracting Officer.
 - 3. At least one "toolbox" safety meeting shall be conducted weekly by field supervisors or foreman for all workers. An outline report of the meeting, including date, time, duration, attendance, subjects discussed and the name of the director shall be maintained and copies furnished to the designated authority on request.

1.5 SUBMITTALS:

- A. **Submittal "Punch-List:"** A submittal punch list for projects involving "other" hazardous materials as identified in the Construction Contractor's Safety and Health Program and Policies (paragraph B, below) and/or other recognized flammable or toxic products identified in the referenced codes/standards.
- B. **Contractor's Safety and Health Program and Policies:** Submit a Plan of Action for handling hazardous materials (except for asbestos, lead based paint, PCBs and mercury lamps as they are covered by specific sections) and/or flammable or toxic products. Work shall not commence

until the Contractor's safety program has been reviewed by the Architect. The Construction Contractor's Plan of Action shall contain the following:

1. Activity Hazard Analysis and Accident Prevention Plan: Identification of anticipated hazards, problems, and proposed mitigation measures/mechanisms.
 2. Description of how applicable safety and health regulations and standards are to be met.
 3. Protection of the public or others not related to the operation. Maintain code-compliant means of egress for project duration.
 4. Means of protection for adjacent non-construction areas, permanent and temporary access ways, and occupants and for controlling noise/dust/fumes/debris generated by the work.
 5. Contractor Safety Officer: Identify a lead Safety Officer and alternates, including 24-hour contact information for each.
 6. Specialized training and experience of employees to be used for the work.
 7. Type of protective equipment and work procedures to be used.
 8. Material Safety Data Sheets (MSDSs) for, and proposed procedures for using, disposing of, or storing toxic/hazardous materials (also see 29 CFR 1910.1200). All management and disposal of wastes shall be in accordance with Federal, states and local regulations.
 9. Phasing requirements to minimize impact to non-construction work activities.
 10. Emergency procedures for handling accidental spills, releases or potential exposures.
 11. Interfacing of trades and control of subcontractors, if applicable.
 12. Identification of any required analyses, test demonstrations, and validation requirements.
 13. Hazard Communications Plan.
 14. Trenching and Shoring Plan.
 15. Confined Spaces employee certifications and related work procedures.
 16. Multi-Employer Worksite Plan.
 17. Demolition plans outlining protective measures and responsibilities required under 29 CFR 1926, Subpart T.
- C. **Accident Reporting:** Serious accidents such as those resulting in: treatment of an injury at a medical facility; response by emergency medical personnel; or damage to property other than that of the Contractor will be reported to the contracting officer's representative by telephone within twenty-four hours of the occurrence. A copy of each accident report, which the Contractor or subcontractors submit to their insurance carriers, shall be forwarded through the Contracting Officer's Technical Representative (COTR) to the Contracting Officer (CO) as soon as possible (in no event later than seven (7) calendar days after the occurrence). All accidents/losses shall be reported using AOC "Incident Investigation Report" (from AOC Safety Policy 9-4, available from the COTR) or other form that meets OSHA Standards, as required. Any incident involving fatality or permanent total disability, or property damage to the Government or other property amounting to \$100,000 or more requires immediate notification of the AOC Safety and Occupational Health Branch (SOHB).
- D. **MSDSs:** The Contractor shall provide copies of each MSDS, in accordance with 29 CFR 1910.1200 - *App E* and with AOC 52.223-1. One copy shall be provided to the COTR per Division 1 submittal requirements, and a second copy shall be kept in an MSDS binder on the job site.
- E. **Waste Disposal:** The Contractor shall dispose of all wastes and provide all paperwork, including but not limited to, manifests and disposal certifications, in accordance with all federal, state, and local regulations. Asbestos waste shall be accompanied by an Asbestos Shipment

- Record. The AOC shall sign manifests, certifications, and shipping records for lead, asbestos, and PCB wastes generated from this contract.
- F. **Hot Work Permits:** When coordinating with the AOC's jurisdiction Superintendent for hot work, submit AOC designated "Hot Work Permit" (from AOC Safety Policy 10-14, available from the COTR) or other form that meets OSHA Standards, as required.
- G. **Worker Certifications:** The Contractor shall provide copies of all worker certifications for handling Hazardous Materials, Working in Confined Spaces, and other certifications required by OSHA, EPA, and local regulatory agencies (not required by other technical sections in the Project Manual).
- H. **Scaffolding:** All scaffolding that is erected on this job will be erected in accordance with the requirements of 29 CFR 1926, Subpart L -- *Scaffolds*. Per OSHA Standards, a scaffold erection plan will be developed by the Contractor, certified by an engineer (licensed in the District of Columbia, Virginia, or Maryland) and provided to the CO prior to set up. Once in place, the Contractor's assigned safety officer shall inspect and document the conditions of the scaffold and scaffold anchor points prior to use, and once per shift thereafter. Any observed failures in the scaffold shall render it unusable until the condition is rectified and re-inspected. Weekly scaffold inspection reports shall be provided to the designated COTR for inclusion in the contract records.
1. **Other Means of Access:** Should the Contractor employ other means of access to the work area, they shall be utilized in accordance with the requirements of 29 CFR 1926, Subpart N -- *Cranes, Derricks, Hoists, Elevators, and Conveyors*. The Contractor shall submit a plan for use of such equipment, fully coordinated with any other plans for site facilities (i.e., scaffolding, staging, etc.).
 2. **Scaffolding constructed** by the Contractor for use by AOC employees shall also comply with 29 CFR 1910.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT:

- A. **Special facilities,** devices, equipment, clothing, and similar items used by the Contractor in the execution of work shall comply with all applicable regulations. Such materials and equipment shall be identified in the Plan of Action called for herein.

2.2 MATERIAL SAFETY DATA SHEETS (MSDSs):

- A. **MSDSs** shall be available on-site for all products used under this contract. The prime contractor is responsible for meeting the hazard communication requirements, in accordance with 29 CFR 1910.1200. To the extent feasible, non-flammable and non-toxic products shall be used.

PART 3 - EXECUTION

3.1 CAUTIONARY PROCEDURES AT EXISTING VAULTS:

- A. **General:** Transformer vaults may have floors which are PCB contaminated. These vaults are generally marked by blue signs, which identify the vault as PCB-contaminated; assure all vaults are marked with blue signs prior to proceeding with Work. On rare occasions, vault doors in existing buildings may be equipped with protective alarms and devices. Consult the AOC COTR to ascertain whether vault doors in areas under this contract are so equipped and have proper approved signage systems.

3.2 HAZARDOUS MATERIALS:

- A. **General:** The Contractor shall bring to the COTR's attention, any material suspected of being hazardous which he/she encounters during execution of the work. The COTR shall then determine whether the Contractor shall perform tests to determine the nature or toxicity of the material. If the COTR directs the Contractor to perform tests, and/or if the material is found to be hazardous and additional protective measures are needed, a change to the contract may be required (subject to the "AOC Official Procedure for Making Changes to Contracts"). Persons conducting sampling testing and laboratories processing samples shall be certified.

3.3 CONFINED SPACES:

- A. **Confined Spaces:** It is the responsibility of the AOC to identify and demarcate all known confined spaces within our facilities. It is the Contractor's responsibility to notify and coordinate with the Superintendent's Office when confined space work is to be done, obtain permission from this office to enter the space, conduct all required testing of space prior to entry, and complete an entry permit as required by OSHA regulations and the Confined Space Program previously submitted to the AOC COTR for the project.

3.4 PROTECTION:

- A. **Contractor Responsibility:** The Contractor shall take all necessary precautions to prevent injury to the public, building occupants and visitors, and damage to or contamination of property or the environment. For the purposes of this contract, the public or building occupants shall include all persons not employed by the Contractor or subcontractor thereof.
- B. **Welding, Cutting, and Brazing:** The AOC specifically requires a permit for welding, cutting, and brazing. This AOC "Hot Work Permit" shall be approved each day by the AOC Superintendent's Safety Specialist, or his/her designee, and coordinated through the Superintendent's Office whenever welding, cutting or any open flame work is performed. Work areas shall be kept clear of combustibles within a 35-foot radius of any hot work. Combustibles which cannot be removed shall be covered with flame-resistant blankets. Compressed gas cylinders shall be secured in a vertical position and stored in accordance with Compressed Gas Association (CGA) Guidelines at all times. Valve protection caps shall be in place whenever cylinders are not in use, moved or stored. Appropriate fire extinguishers shall be maintained at welding and cutting operations. A designated fire watch shall sign and return the permit. The fire watch shall be on duty during operations and for a minimum of 30 minutes after completion of welding or cutting operations to ensure no possibility of fire exists.
 - 1. Provide adequate ventilation to protect employees from fume or gas exposure.

2. During arc welding activities erect screens to shield activities.
- C. **Storage:** It is prohibited to store, position, or use equipment, tools, materials, scraps, and trash in a manner likely to present a hazard to the public or building occupants by its accidental shifting, ignition, or other hazardous qualities. Storing of combustible or flammable liquids shall be in accordance with the current edition of the National Fire Code for Flammable and Combustible Materials (NFPA 30). Compressed gases shall be stored in accordance with Compressed Gas Association (CGA) guidelines.
 - D. **Obstructions:** No corridor, aisle, stairway, door, or exit shall be obstructed or used in such a manner as to encroach upon routes of ingress or egress utilized by the public or building occupants, or to present an unsafe or unhealthy condition to the public or building occupants.
 - E. **Housekeeping:** Housekeeping practices shall be in conformance with OSHA 29 CFR 1910.22, 29 CFR 1910.141, 29 CFR 1910.1001, 29 CFR 1910.1025, 29 CFR 1926.25, 29 CFR 1926.62, and 29 CFR 1926.1101, for non-construction and construction contracts respectively.
 - F. **Protection of the Public and Federal Employees:** Work shall not be performed in any area occupied by the public or Federal employees unless the Contractor takes adequate steps for the protection of the public and Federal employees, and work is specifically permitted by the contract/COTR/jurisdiction Superintendent. Comply with requirements of ANSI A10.34.2001.
 - G. **Electrical Systems:** In addition to complying with the referenced standards in this Section, refer to Division 1 requirements for "Temporary Facilities and Controls." Provide compliant electrical supply, overload/ground fault protection, lighting, and signage/notification systems. Ensure that arrangements and installations accommodate the Architect's lockout/tagout procedures.
 - H. **Mechanical Systems:** Mechanical systems and equipment, and the components thereof, will be arranged and installed to provide ready accessibility and ease of lock/tag application during lockout/tagout procedures for AOC employees, post construction.
 - I. **Fences & Barricades:** The work area shall be fenced, barricaded, or otherwise segregated from the public or building occupants to prevent unauthorized entry into the work area. Fence elements shall be installed in such a manner as to overcome the negative or hazardous effects of wind and weather typical to the region. The use of barbed wire is prohibited unless requested in writing by the Architect.
 - J. **Pedestrian Access Ways:** All interior and exterior paths of travel established for pedestrian circulation within and around a construction site shall meet the requirements of 28 CFR Part 36 (*ADAA*G), Appendix A (Standards for Accessible Design), Articles 4.3 through 4.5; when a path is changed to accommodate work, the Contractor shall also provide directional signage in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), 2003. All paths shall be maintained clear and level, without obstruction. Any proposed exceptions to these requirement must be approved in writing by the Architect prior to construction.
 1. **Lighting:** All interior/exterior access ways, both permanent and temporary, shall be provided with a uniform minimum lighting level of 3 footcandles (fc) at the walking surface, in accordance with 29 CFR 1926.56(a), Table D-3 - *Minimum Illumination*

Intensities in Foot-Candles.

- K. **Alternate Precautions:** When the nature of the work prevents isolation of the work area and the public or building occupants may be in or pass through, under or over the work area, alternate precautions such as the posting of signs, warning lights, the use of signal persons, the erection of barricades or similar controls around particularly hazardous operations shall be approved and used.
- L. **Work Over Thoroughfares:** When work is to be performed over a public thoroughfare such as a sidewalk, lobby, or corridor, the thoroughfare shall be closed, if possible, or other precautions taken such as the installation of screens or barricades. When exposure to falling objects exists, as during the erection of building walls or during demolition, special protection of the type detailed in 29 CFR 1910/1926 shall be provided.
- M. **Temporary Construction Barriers:** Temporary construction barriers, partitions which cover a hole in a rated fire wall, protect occupants from noise or vibration, or separate the construction from public access and exit corridors shall be erected floor-to-ceiling, wall-to-wall, and shall remain in place for the duration of the contract. The minimum construction standards for these temporary barriers shall be metal studs, anchored top and bottom at a maximum spacing of 16 inches (406 mm) on-center, and covered with a minimum of one layer of ½-inch gypsum wallboard.
- N. **Dust and Fume Control Measures:** Work performed adjacent to occupied areas shall be done within dust control barriers (generally constructed of polyethylene sheeting or other barriers as approved by the Architect). To the extent feasible, maintain the work environment at a negative pressure differential with the adjoining occupied areas. The use of fume and odor producing products and materials shall be done in such a manner, or at such a time as to minimize impact on building occupants. Provide measures to minimize migration of dust, fumes, gases, and similar affects into the adjacent areas. Ensure that adequate ventilation is provided to work areas in conformance with OSHA regulations.
- O. **Roof Work:** During the performance of roofing work, employees will be protected as required by the OSHA standards contained in 29 CFR 1926 - subpart M "Fall Protection."
- P. **Removal of Fences and Barricades:** Fences and barricades shall be removed upon completion of the project, in accordance with local ordinance and to the satisfaction of the Contracting Officer or his/her representative(s).
- Q. **Completion of Work:** Do not create or leave hazards unabated (e.g., open or absent electrical panels, unmarked circuit breakers/fuses, faceplates missing from receptacles, open maholes, un-barricaded trenches/excavations, etc.).

END OF SECTION 01546

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SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY:

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
 - 1. Divisions 2 through 16 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - 2. Division 7 Section "Firestopping" for patching fire-rated construction.

1.3 DEFINITIONS:

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS:

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.

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4. Dates: Indicate when cutting and patching will be performed.
5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
6. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE:

A. Structural Elements:

1. No structural members shall be cut, drilled, or burned. Such members include, but are not limited to, beams, columns, trusses, braces, headers and bearing wall framing elements.

B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:

1. Primary operational systems and equipment.
2. Air or smoke barriers.
3. Fire-suppression systems.
4. Mechanical systems piping and ducts.
5. Control systems.
6. Communication systems.
7. Conveying systems.
8. Electrical wiring systems.

C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:

1. Membranes and flashings.
2. Equipment supports.

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3. Piping, ductwork, vessels, and equipment.
 4. Noise- and vibration-control elements and systems.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.6 WARRANTY:

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials unless otherwise directed. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.
- C. Specific Patch Area Requirements:
1. Metal Cover Plates- size as required to cover openings left by removed devices. Size of plate should be min. of 3/8" larger (typically rectangular in shape) to adequate overlap the patch area. Patch holes behind cover plate with approved drywall/plaster materials and in such a manner so cover plates are securely fastened to the wall. Metal Cover plates are required in the following areas/finishes:
 - a) At all Stone locations- Oxidized bronze finish to match adjacent surfaces
 - b) At all other locations except painted drywall/plaster- factory painted finish to match adjacent wall/ceiling surface color.
 - c) At Acoustical Ceiling Panels- Metal plate to be round for smoke/fire detectors devices- factory painted finish to match adjacent panel color.

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2. For Plaster/Drywall Painted Surfaces - Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - a) If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.
 - b) Match paint color of existing surfaces
 - c) Utilize accepted trade standards/techniques for drywall-plastering patchwork
3. For Areas Requiring New Pull Stations at Exterior Entrances with stone or painted stone walls: Locate device in same location as existing devices

PART 3 - EXECUTION

3.1 EXAMINATION:

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION:

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

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3.3 PERFORMANCE:

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections and specifically "Article 2.1 –Materials" of this section.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

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- a) Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b) Restore damaged pipe covering to its original condition.
 - c) Where existing devices have been removed from walls, cover remaining hole with a surface wall plate to match existing hardware and/or existing wall plate finish in adjacent area.
- 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a) Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
- 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
- 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

-END OF SECTION 01731-

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SECTION 07270 - FIRESTOPPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplemental Conditions and Division - 1 Specifications, apply to the work of this Section.

1.2 DESCRIPTION OF WORK:

- A. General: Firestopping is defined herein as the process of furnishing and installing a material, or combination of materials, in various constructions to maintain an effective barrier against the spread of flame, smoke and gases and to retain the integrity of time-rated construction. It shall be used in duct, cables, conduit, and piping penetrations in specific locations as follows:
 - 1. Through floor slabs. Except between stair landings within a stair enclosure, all floor penetrations shall be assumed to be two-hour time rated.
 - 2. Through time-rated partitions or fire walls. Unless otherwise specified or shown on the drawings, assume that all corridor walls, storage room walls, and mechanical equipment rooms shall be considered time rated one-hour.
 - 3. Penetration of vertical service shafts. All vertical shafts shall be considered time rated two-hours.
 - 4. Other locations where specifically shown on the drawings or where called for in other sections of the specification.

1.3 QUALITY ASSURANCE:

- A. EXAMINATION OF WORK BY CONTRACTOR: Examine areas to receive firestopping prior to beginning work or to submitting the data required by the paragraph, "Submittals." Data to be submitted shall be based on the findings of the Contractor's examination.

1.4 SUBMITTALS:

- A. Submit the following for approval of the Architect and Fire Marshal prior to beginning work. Submit applicable data for each condition specified.
 - 1. Certificates of conformance or compliance, accompanied by classification by a nationally recognized testing authority or by other supporting evidence satisfactory to the A/E, that the material or combination of materials used meet the requirements for each applicable ASTM test.

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2. Manufacturer's catalog data for all materials and prefabricated devices, including descriptions sufficient to identify them on the job, and instructions for installation.
3. Complete construction details (shop drawings) showing proposed material, reinforcement, anchorage, fastenings, and method of installation.

PART 2 – PRODUCTS

2.1 FIRE ENDURANCE RATED PRODUCTS:

- A. THROUGH WALL PENETRATIONS: Products used to seal penetrations in time-rated floor or wall assemblies shall be capable of preventing the passage of flame and hot gases sufficient to cause flaming of any element of the unexposed side of the fire stop when subjected to ASTM E-814 time-temperature fire conditions, and shall meet or exceed the minimum required fire rating specified in Section 1.2.

2.2 OTHER PRODUCTS:

- A. GENERAL: Materials or combinations of materials used for firestopping in locations where a fire endurance rating is not called for shall comply with the following as a minimum:
 1. Flame Spread: 25 or less, ASTM E 84.
 2. Smoke Developed: 100 or less, ASTM E 84.

PART 3 - EXECUTION

3.1 DELIVERY AND STORAGE OF MATERIALS:

- A. Deliver materials in their original unopened packages. Store in a location providing protection from damage and exposure to elements. Damaged or deteriorated materials shall be removed from the site.

3.2 INSTALLATION:

- A. Install in accordance with approved construction drawings (shop drawings) and approved manufacturer's literature, installation instructions and the following requirements:
 1. Firestopping materials shall completely fill the void space regardless of geometric configuration, subject to tolerances established by the manufacturer when intumescent materials are used.
 2. Firestopping for filling voids in floors in which the smallest dimension is 4 inches or more shall support the same load as the floor is designed to support or shall be protected by a permanent barrier to prevent loading or traffic on the firestopped area.

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3.3 INSPECTION:

- A. Approved installation instructions shall be present at each work area prior to the beginning work for a quality check by the Architect. Periodic quality checks shall be performed at the discretion of the Architect, and should installation prove to be substandard, all firestopping installed up to that time not meeting approved standards shall be replaced at no additional cost to the Architect. A seven day notification shall be provided to the Fire Marshal's office to inspect the fire stopping installation
- B. Area of work shall remain available for inspection by the Architect before and after application of firestopping.
- C. NOTIFICATION: Notify the Architect at least 24 hours prior to installation of firestopping in each area to allow opportunity for inspection.

3.4 CLEAN-UP:

- A. ACCEPTANCE OF WORK: As work on each floor is completed, remove materials, litter, and debris. All work shall be inspected and accepted by the Architect before materials and equipment are moved to the next scheduled work area.
- B. LABELING: Upon completion, affix label to or adjacent to each firestopped penetration in time-rated assemblies indicating material and proper replacement if later disturbed.

-END OF SECTION 07270-

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DIVISION 13852 - INTERIOR FIRE DETECTION AND ALARM SYSTEM

PART 1 - GENERAL

1.01 REFERENCES:

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C80.1 Rigid Steel Conduit - Zinc Coated

ANSI C80.3 Electrical Metallic Tubing - Zinc Coated

ANSI/BHMA A156.15 Closer Holder Release Devices
(BHMA 321)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

AMERICAN WITH DISABILITIES ACT OF 1990 (ADA)

FACTORY MUTUAL ENGINEERING AND RESEARCH CORPORATION (FM)

FM P7825 Approval Guide

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. (IEEE)

IEEE C62.41 Recommended Practice on Surge
 Voltages in Low-Voltage AC Power Circuits

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70-2002 National Electrical Code

NFPA 72-2002 National Fire Alarm Code

NFPA 90A-2002 Installation of Air Conditioning
 and Ventilating Systems

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UNDERWRITERS LABORATORIES INC. (UL) (Latest Edition)

UL FPED	Fire Protection Equipment Directory
UL 6	Rigid Metal Conduit
UL 467	Grounding and Bonding Equipment
UL 497B	Safety Protectors for Data Communication and Fire Alarm Circuits
UL 514A	Metallic Outlet Boxes
UL 514B	Fittings for Conduit and Outlet Boxes
UL 797	Electrical Metallic Tubing
UL 1242	Intermediate Metal Conduit
UL 1449	Safety Transient Voltage Surge Suppressors
UL 1971	Safety Signaling Devices for the Hearing Impaired
AOC	Design Manual

1.02 RELATED REQUIREMENTS:

Section 16050, "Basic Electrical Materials and Methods" applies to this section with additions and modifications specified herein.

1.03 DESCRIPTION OF WORK:

The work includes replacement of the entire existing fire alarm system including material, tools, equipment, installation, and testing necessary for and incidental to the provisions of a complete and usable system conforming to the applicable requirements of ADA, NFPA 70, NFPA 72, NFPA 90A, NFPA 101, IBC, and this specification. In referenced NFPA publications, the advisory provisions shall be mandatory, as though the word "shall" had been substituted for "should" wherever it appears; reference to the "authority having jurisdiction shall be interpreted to mean the Architect of the Capitol Fire Marshall's Office. Equipment and devices shall be compatible and operable in all respects to form a complete and operating fire alarm system. Materials and equipment to be furnished under this contract shall be essentially the current design products of manufacturers regularly engaged in production of such equipment and shall be listed by the Underwriters' Laboratories, Inc. in the UL FPED, or approved by Factory Mutual System and listed in FM P7825

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This system shall include but not limited to the following:

- a. An addressable fire alarm control panel with voice, Class A signaling, line circuit, Class A notification circuits, auto programming, walk test, and 80 character display
- b. Remote transponder for voice in the Greenhouse areas
- c. Auxiliary power supplies to power strobes as necessary
- d. Speak/strobe and strobes
- e. Water proof speaker/strobes in Greenhouse
- f. Smoke detection throughout Head House
- g. Linear heat detector in skylight to Head House and Greenhouses
- h. Manual pull stations at all exits from the Head House and Greenhouses and within a 200' travel distance from all portions of the facility.
- i. Elevator recall
- j. Elevator shunt trip power
- k. Duct smoke detectors with fan shut down
- l. All circuits both data and notification shall be Class A
- m. System printer
- n. Magnetic door holders
- o. Monitoring as required by AOC.
- p. Monitoring of sprinkler system alarm and tamper.

An bid-option (Option 1) to the contract is the protection of the Greenhouses with linear type heat detection. This includes the following:

- a. Linear detection throughout the Green Houses on Class A initiating circuits
 - b. Linear fire alarm control panels in the Tunnel
 - c. Forty relays and monitors modules to monitor the 20 zones of linear detection
 - d. Two monitor modules for monitoring the linear detection panel both for alarm and trouble.
- After final testing of the new fire alarm system the existing fire alarm system shall be removed and all areas affected by the removal shall be repaired and painted to match adjacent surfaces to the satisfaction of the Architect of the Capitol.

An bid-option (Option2) to the contract is for the contractor to provide complete intelligibility for the voice notification system throughout the building in accordance with NFPA 72 appendix. This shall include the labor and materials to test the system for intelligibility and provide any additional equipment to meet the required level of intelligibility as required by the Architect of The Capitol.

1.04 SUBMITTALS:

Refer to Section 01000 Paragraph 1.6, "Submittals." For information relating to submittals. Submit 6 complete set of submittals. Partial submittals will not be acceptable and will be returned without revision. Before any work is commenced, the submittal shall be approved by the AOC Fire Marshal's office.

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A. Manufacturer's Catalog Data:

1. Control panels and modules
2. Smoke detectors
3. Manual pull stations
4. Linear detection
5. Duct smoke detectors
6. Heat detectors
7. Visible appliances
8. Audible appliances
9. Electro-magnetic door holder-releases
10. Monitoring modules
11. Control modules
12. Relays
13. Electromagnetic door holder
14. Transient voltage suppressors
15. Amplifiers
16. Tone generators
17. Conduit
18. Wiring
19. Terminal cabinets and terminal strips
20. Fittings for conduit and outlet boxes

Data which describe more than one type of item shall be clearly marked to indicate which type the Contractor intends to provide. Submit one original for each item and clear, legible, first-generation photocopies for the remainder of the specified copies. Incomplete or illegible photocopies will not be accepted. Partial submittals will not be accepted.

Contractor shall fully describe product to demonstrate compliance with all specification requirements.

B. Drawings:

1. System floor plans: Submit shop drawings of the system floor plans showing locations of initiating and indicating appliances and end-of-line supervisory devices. Show wire color coding, wire counts, and device wiring order. Show candela rating of each visible notification appliance and wattage tap for each speaker.
2. System wiring diagrams: Submit complete wiring diagrams of the system showing points of connection and terminals used for all electrical connections in the system. Show all modules, relays, switches and lamps in the control panel.

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C. Design Data:

1. Power calculations: Submit design calculations for work specified herein to substantiate that the battery capacity exceeds supervisory and alarm power requirements. Show comparison of the notification appliance circuit alarm power requirements with the rated circuit power output. Power supply shall be sized to accommodate the maximum output and 20% safety factor.

D. Schedules: Conductor wire marker schedule

E. Statements: Qualifications of installer

F. Field Test Reports:

1. Preliminary testing
2. Final acceptance testing
3. Submit for all inspections and tests specified under paragraph titled "Field Quality Control."

G. Records: Upon completion and before final acceptance of the work furnish to the AOC complete sets of system as-built drawings, including complete as-built circuit diagrams, of each system. The as-built drawings shall be "D" size 34 by 22 inches reproducible drawings on Mylar film drawn to the same scale as the contract drawings and with title block similar to contract drawings. The as-built drawings shall be furnished in addition to the record drawings and provided electronically via CD.

H. Operation and Maintenance Manuals: Fire alarm system, Data Package. Submit operation and maintenance data. Inscribe the following identification on the cover: the words OPERATION AND MAINTENANCE MANUAL, the location of the building, the name of the Contractor, system manufacturer, and the contract number. The instructions shall be legible and easily read with large sheets of drawings folded in. The manual shall include: circuit drawings; wiring and control diagrams with data to explain detailed operation and control of each item of equipment; a control sequence describing start-up, operation and shutdown instructions; installation instructions; maintenance instructions; safety precautions, diagrams, and illustrations; test procedures; performance data; and parts list.

1.05 QUALITY ASSURANCE:

- A. Qualifications of Installer: The Contractor or installer shall have satisfactorily installed fire alarm systems of the same type and design as specified herein and shall be certified for the installation and testing of fire alarm systems. Prior to commencing fire alarm system work,

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submit data showing that the Contractor or installer has satisfactorily installed fire alarm systems of the same type and design as specified herein and certify that each system has performed satisfactorily in the manner intended. Submit proof of certification and a list of installer's personnel. For each system installed, submit the following:

1. A detailed summary of the type and design of the system;
 2. The contract name or number, completion date of the project and total cost of the system;
 3. The name and telephone number of the facility or installation for whom the work was performed;
 4. The name and telephone number of a supervisory level point of contact at the facility or installation who has knowledge of the performance of the Contractor's or installer's work..
- B. Manufacturer's Representative: Provide the services of a representative or technician from the manufacturer of the system, experienced in the installation and operation of the type of system being provided, to supervise installation, adjustment, preliminary testing, and final testing of the system and to provide instruction to Government personnel.
- C. Qualifications of System Technician: Installation drawings, shop drawings and as-built drawings shall be prepared by, or under the supervision of, a qualified technician. Qualified technician shall be an individual who is experienced with the types of work specified herein, and is currently certified by the National Institute for Certification in Engineering Technologies (NICET) as an engineering technician with minimum Level III certification in fire alarm system program. Contractor shall submit data showing the name and certification of the technician at or prior to submittal of drawings.

1.06 SYSTEM OPERATION:

- A. Control Features:
1. The System shall be complete, supervised, non-coded, addressable fire alarm system with dual channel voice and synchronized strobe evacuation, intelligent analog alarm initiation, and complying with all aspects of the applicable documents listed herein.
 2. Any intelligent analog smoke detector shall include a selectable alarm confirmation capability. Alarm conditions on these devices are processed through a confirmation period of 10 seconds. Over the next 300 seconds, a signal justification period is initiated where any subsequent alarms are reported immediately.
 3. A subprogram shall be provided to allow environmental compensating for smoke

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detector sensitivity. Each smoke detector shall be programmed with this capability.

4. The system shall provide a field test function where one person can test the complete system or a specified area at the fire alarm control panel while maintaining full operational function of the other areas not under test. Alarms, troubles, device types, and the initiation device addresses shall be logged to the system printer and historical memory.
5. Provide program capability via switches in a locked portion of the fire alarm control panel to bypass the notification appliance circuits, air handler shutdown, elevator recall, and fire door release. Operation of these switches shall indicate this action as a trouble signal on the FACP display and printer output.
6. History Logging - recirculating last 500 events. Shall be downloadable by classification for selective event reports.
7. Provide spare capacity in all circuits of 20%.

B. Supervision:

1. Class A initiating device circuits.
2. Class A signaling line and voice buss circuits for the network between FACP and transponder. Install Class A circuits with independent, separate outgoing and incoming conduit and riser paths to comply with NFPA 72 survivability criteria.
3. Synchronized Class A notification appliance circuits.
4. Provide electrical supervision of the primary power (AC) supply, presence of the battery, battery voltage, and placement of system modules within the control panel.
5. Provide electrical supervision of the circuits leading to interfacing modules for the monitoring of contact type initiation devices, the control of electrical devices, load control relays (controlling elevators and HVAC equipment).

C. Alarm Functions: Fire alarm system functions and operations shall be as indicated on the alarm Function Matrix operating sequence included in the contract documents. Operation of an alarm initiating device shall cause the functions indicated on the matrix to occur as described below:

1. Sound General Evacuation Alarm: This function shall cause all strobe lights to activate in synchronized manner and speakers in the building to sound a slow whoop for 3 cycles followed by the voice message, "May I have your attention

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please! May I have your attention please! A fire has been reported in the building. Please walk to the nearest exit and leave the building. Do not use the elevators.” This is repeated until the control panel is reset. After the digital message has ended, or if the digitally pre-recorded message shall fail for any reason, the alarm signal shall revert back to a slow whoop, which will continue until manually silenced. It shall also be possible to preempt the whoop signal or prerecorded voice evacuation message and sound a live message from the microphone at the FACP location on an area-by-area basis. All areas not selected for a manual message shall continue to receive the pre-recorded message or whoop signal.

2. While the system shall be set up for general evacuation, the fire alarm notification system shall be capable of individual, selective and all-call audio/visual paging to the following areas:
 - a. First Floor
 - b. Basement
 - c. Tunnel
 - d. Greenhouses
3. Release Held-Open Fire Doors: This function shall cause all fire doors in the building, which are held open by electrical hold-open/release mechanisms to be released, and allowed to close.
4. Shutdown Supply Fan Served: This function shall cause the air handling system supply and return fan shut down.
5. Initiate Elevator Recall: Elevator shaft, machine room and lobby smoke detectors shall cause a signal to be sent to the elevator controller recalling the elevator to the preselected floor, or if the activated initiation device is on the preselected floor, the elevator will be recalled to the preselected secondary floor. Operation shall comply with Rule 211.3b of ASME A17.1.
6. Shutdown Power to Elevator Equipment: This function shall cause a signal to be sent to a shunt trip switch in the power circuit serving the elevator to cause elevator shut down. Operation shall comply with Rule 102.2A (c) (3) of ASME A17.1.
7. Illuminate LED on Device in Alarm: This function shall cause an LED, integral or remote to a device, to illuminate, indicating that the device is in alarm. For contact devices, such a sprinkler valve tamper switches, the LED shall be built into the intelligent system interface module monitoring the device.
8. Activate audio/visual signals and display address on the FACP: This function shall illuminate an alarm indicating LED, sound an audible alarm, and display a device address at the FACP when the system is in the alarm condition. All strobes will

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remain flashing until system is reset.

- D. Trouble Functions: Provide the following actions and indications at the FACP upon a single break, open condition, or ground fault on all supervised circuits which may prevent the required operation of the system:
1. Annunciate at the FACP: A yellow visual signal, audible alarm, and alphanumeric LCD display of type of trouble, and device address.
 2. Fire suppression system control valves shall be supervised to ensure circuit integrity and open position. Closing a control valve shall cause a supervisory condition.

1.07 SPARE PARTS:

Furnish the following spare parts:

- A. 5 complete sets of system keys
- B. 2 of each type of fuse required by the system
- C. 5 of each type of notification appliance (plus 5 additional weatherproof speaker/strobes)
- D. 5 of each type of smoke detector
- E. 2 of each type of manual pull station
- F. 2 of each type of heat detector

PART 2 - PRODUCTS

2.01 FIRE/VOICE ALARM CONTROL PANEL (FACP)

The control panel shall be a U.L. Listed with networking service and visual and voice evacuation. All components shall be by one manufacturer. This FACP shall be the central control unit for the entire system. The control panel shall provide power, supervision, control, and logic, utilizing solid state modular components, internally mounted and arranged for easy access. The FACP unit shall be suitable for operation on the 120 volt, 60 hertz for the building emergency power. A transformer shall be provided to stepdown the emergency power. A control/display module shall perform the following functions:

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- a. Provide communication between the FACP and transponder
- b. Non - volatile memory for system database logic, operating system and event history
- c. Visual indication of alarm, supervisory or trouble initiation on the fire alarm control panel shall be by liquid crystal display or similar means with a minimum of 80 characters of which at least 32 are field changeable.
- d. LED display for “ALARM”, “AUDIBLE SILENCED”, “SUPERVISORY”, “TROUBLE”, “POWER ON” and “PARTIAL SYSTEM DISABLED”.
- e. Touch activated membrane switches for “ALARM ACKNOWLEDGE”, “AUDIBLE SILENCE”, “SUPERVISORY ACKNOWLEDGE”, “TROUBLE ACKNOWLEDGE”, “RESET”, “DISPLAY HOLD” and “DISPLAY NEXT”.
- f. Touch activated membrane switches, programmable to perform twelve custom functions such as drill, disable, and bypass automatic control commands or other special functions as required by the system user.
- g. Programmable panel mounted relays to be software programmed to perform control functions.
- h. Indicating notification, appliance circuits as required to supervise and operate all connected indicating appliances. Operation of indicating circuits shall be fully integrated with the FACP strobe notification appliances shall operate in a synchronized manner. Switches shall be used to activate or deactivate speaker and strobe circuits. Through the use of multi-colored LED's, a clear indication shall be provided showing which circuits are active and to which strobe and audio channel. The audio circuit shall activate a slow whoop tone for the three cycles followed by a voice message, which is repeated until the control panel is reset. A live vice message shall override the automatic output though use of a microphone input at the control panel. The system shall be capable of operating all strobes and speakers at the same time. The digitalized voice message shall consist of a non-volatile (EPROM) microprocessor based input to the amplifiers. The microprocessor shall actively interrogate all circuitry, field wiring and digital coding necessary for the immediate and accurate broadcasting of the stored voice data into the appropriate amplifier input. Loss of operating power, supervisory power or any other malfunction which could render the digitalized voice module inoperative shall automatically cause the slow whoop tone o take over all functions assigned to the failed unit.

2.02 FIRE DETECTORS

- A. System intelligent alarm initiation devices shall be furnished and installed where indicated on the drawings including features as follows:

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1. The device shall be protected by software in both the logic circuitry and the communication circuitry against undesirable effects from proximate electrical and electronic devices such as fluorescent light fixtures, variable frequency motor controllers and other sources of RF interference.
2. On board trapping and suppression of externally generated noise signals, commonly induced into detector circuitry as a result of system installation and interconnection wiring.
3. On board state of the art microprocessor, analog and digital circuitry, and Eeprom storage, providing power for operation of the detector error checking, detection and supervision software filters.
4. Self compensation for ambient temperature and humidity.
5. Internal alarm validation utilizing software noise filters before system alarm reports are generated.
6. Devices shall be listed by the U.L. for sensitivity testing by means of the portable accomplished electronically and devices requiring dip switches, rotary switches, jumpers and/or jumpers are not acceptable.
7. The reading of the device sensitivity shall yield a discrete voltage level or percent of obscuration level as selected in software for logging and tracking of status to determine maintenance and cleaning requirements.
8. Detectors not listed for sensitivity testing from the control panel shall not be deemed acceptable due to the additional maintenance expense involved in the required removal, calibrated smoke generation and testing as described by N.F.P.A. 72 7-3.2.1.
9. Sensitivity testing performed from the control panel shall be logged by the system printer if specified, as a permanent record of the performance of code mandated testing.
10. Devices shall be equipped with an LED indicator, which shall indicate alarm activation by the detection device. The LED indicator shall be operational when the system is operating from reserve power as well as normal power.
11. Detectors shall be assigned a sensitivity level for alarm threshold by the central controller based on environment, time of day or other programmable functions as required by the system user and shall respond at the level whether in the on line mode or default mode.

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B. Smoke Sensor Detectors, Photoelectric:

1. Detectors shall be listed for use as open area protective coverage, in duct installation and sampling assembly installation and shall be insensitive to air velocity changes.
2. The detector shall be designed to eliminate calibration errors associated with field cleaning of the chamber.
3. Fire Detectors shall be programmable as application specific, selected in software for a minimum of eleven specific environmental fire fingerprints unique to the installed location. These fire fingerprints shall eliminate the possibility of false indications caused by dust, moisture, RFI/EMI, chemical fumes, air movement and other deceptive phenomena while factoring fire burn rates, obscuration rate changes and hot/cold smoke phenomenon into the alarm decision to give the earliest possible real alarm condition report.
 - a. Detection technologies using time delays such as alarm verification or alarm confirmation to verify the existence of an alarm condition shall not be considered acceptable.
 - b. Other analysis techniques which rely on priority matrix or counting zone logic to monitor multiple detectors in a protected area shall be deemed unacceptable.
 - c. Detector programming shall be accessible in personal computer-based system configuration software. It shall also be accessible through a password-protected function at the fire alarm control panel keypad to allow changes without the need for a computer.
 - d. The detector manufacturer shall have an installed base of minimum of 500,000 detectors using the technology employed to demonstrate the product acceptability.

C. Heat Detectors, Fixed Temperature:

1. Detectors shall be fixed Temperature only, rated at 135 degrees Fahrenheit and be restorable. Detectors shall be constructed to compensate for the thermal inertia inherent in conventional type detectors due to the thermal mass, and alarm at the set point of 135 degrees Fahrenheit.
2. The detectors furnished shall have a listed spacing and installed in accordance with their listing for use in environments as covered by Factory Mutual and UL (UQGS) and shall be installed according to the requirements of NFPA 72 for open area

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coverage.

2.03 MANUAL PULL STATIONS:

- A. Provide addressable type double action manual pull stations where shown on the drawings, to be flush mounted as required.
 - 1. Station shall be equipped with terminal strip and pressure style screw terminals for the connection of field wiring.
 - 2. Surface mounted stations where indicated on the drawings shall be mounted using a manufacturers prescribed matching baked red enamel smooth outlet box with threaded outlets.
 - 3. All stations in the Greenhouses shall be weather proof.

2.04 ADDRESSABLE INTERFACE/RELAY DEVICE: (Monitor Module)

- A. Furnish and install, for the monitoring of contact type initiation devices and for the control of electrical devices where required, intelligent analog signaling circuit interface module. Modules shall be supplied to meet the project requirements as follows:
 - 1. A dual circuit intelligent signaling circuit interface module for monitoring alarm, trouble, supervisory security or status contact type devices.
 - 2. Unit as above with form C (SPDT) software programmable control contacts rated at 4 amps for the management of specified electrical loads as required by this specification.

2.05 INTELLIGENT SUPERVISED CONTROL MODULE:

- A. Furnish and install for the control of supervised relays, contractors, audible signal circuits, visual signal circuits, and distributed speaker circuits, intelligent supervisory and control modules including features as follows:
 - 1. Modules shall be available to supervise reverse polarity supervised indicating circuits utilizing 24VDC, audio circuits utilizing 70.7VRMS.
 - 2. The module shall be suitable for semi-flush or surface mounting in a 2" deep, 4" mm square or double gang electrical outlet box having a depth of 3".
 - 3. All controlled circuits shall be power limited at 1.5A, produced by self-restoring thermal components. Units requiring circuit replacement for restoration of outputs are not acceptable.

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- a. Signal outputs shall be supported in Style Y configuration.
- b. The module shall report a trouble condition in the event of loss of the 24 VDC signal operating supply voltage.

2.06 ALARM INDICATING NOTIFICATION DEVICES: Speakers shall be 70.7VRMS and strobes shall be 24VDC and shall be equipped with terminal strip and pressure style screw terminals for the connection of field wiring. Devices shall be mounted to a 4" square outlet boxes.

A. Fire Alarm Speakers:

1. Provide fire alarm speakers conforming to UL 464 having a minimum of three tap settings and separate terminations for each "in" and "out" connection. Tap settings shall include taps of 1/8 watt, 1/4 watt, 1/2 watt, 1 watt, 2 watts, 4 watts and 8 watts at 70.7 VRMS. Unless noted otherwise, speakers shall utilize the 1/2 watt tap in the Headhouse and a 4 watt tap in the Greenhouses. Greenhouse walkways shall utilize the 1 watt tap. All speakers shall be capable of installation on standard 4" square electrical boxes. Where speakers and strobes are provided in the same location, they may be combined into a single wall mounted unit. Provide 4.5" deep, flush mounted back boxes. All speakers in the Greenhouses shall be weather proof

B. Visual Alarm Strobe Lights:

1. Provide with red finish plate and with the word "FIRE" vertically printed.
2. Xenon strobe, shall be clear or white, with a minimum repetition rate of 1 HZ, not exceeding 3 HZ and a maximum duty cycle of 40% with a pulse duration of 0.2 seconds. Strobe flash shall be synchronized with other strobe devices operating.
3. Visual alarm signals shall be furnished with light intensities of 15, 30, 75, 110, 180 candela and meet the requirements of ADA and UL 1971.
4. Provide strobe light visual alarm signals, which operate on 24VDC.. Provide strobe light visual alarm signals, which operate on 24VDC.
5. Provide surface mounted red enameled back boxes to match appliance in both fit and finish.
6. Weather proof strobes rated at 180 candela shall be provided in the Greenhouses.

C. Audio-visual Combination Assemblies shall be provided where strobes and speakers are

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identified at the same locations.

2.07 AMPLIFIERS, PREAMPLIFIERS, TONE GENERATORS:

- A. General: Amplifiers, preamplifiers, tone generators, digitalized voice drives and all other hardware necessary for a complete, operational voice/alarm signaling service conforming to NFPA 72 shall be housed in a remote fire alarm control unit, transponder, terminal cabinet, or in the fire alarm control panel. Each amplifier shall have one channel to broadcast a message or for paging. Amplifier output circuits shall be 70.7 VRMS. Configure amplifiers to provide dual channel operation.
- B. Construction: Amplifiers shall utilize solid-state components and shall be provided with output protection devices sufficient to protect the amplifier against any transient up to ten (10) times the highest rated voltage in the system.
- C. Inputs: Each system shall be equipped with separate inputs from the tone generator, digitalized voice driver and panel mounted microphone. Microphone inputs shall be of the low impedance, balanced line type. Both microphone and tone generator input shall be operational on any amplifier.
- D. Tone Generator: The tone generator shall be of the modular, plug-in type with securely attached labels to identify the component as a tone generator and to identify the specific tone it produces. The tone generator shall produce a slow whoop tone, which shall slowly ascend from low (500 hertz) to high (1200 hertz), and be constantly repeated until interrupted by either the digitalized voice message, the microphone input or the alarm silence mode as specified. Each slow whoop cycle shall last approximately four (4) seconds. The tone generator shall be single channel with an automatic backup generator per channel such that failure of the primary tone generator causes the backup generator to automatically take over the functions of the failed unit and also causes transfer of the common trouble relay.
- E. Protection Circuits: Each amplifier shall be constantly supervised for any condition which could render the amplifier inoperable at its maximum output. Failure of any component shall cause automatic transfer to a designated backup amplifier, illumination of a visual "amplifier trouble" indicator on the control panel, appropriate logging of the condition on the system printer and other actions for trouble conditions as specified. Provide one back-up amplifier for every two primary amplifiers. Provide one back-up amplifier for every two primary amplifiers.

2.08 WATER FLOW DETECTORS:

Connect existing waterflow detectors into the fire alarm system via an addressable interface device.

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2.09 ELECTROMAGNETIC DOOR HOLDERS::

Where indicated on the drawings, connect FACP to power and control magnetic fire door hold open devices.

2.10 REMOTE TRANSPONDER:

Provide remote panels in the locations shown on the panels. Remote panels shall meet and be compatible with the requirements listed under 2.1.

2.11 POWER SUPPLIES:

- A. Primary power for the FACP/Transponder/linear detection panel and PAD panel shall be 120VAC service obtained from the emergency power panel board. Provide transient voltage surge suppression for every circuit powering fire alarm control equipment.
- B. Secondary power for all panels shall be provided by sealed gelled electrolyte batteries. Batteries shall be housed in the control cabinet or a separate cabinet with adequate cell separation to prevent accidental discharge.
- C. Battery Capacity: Battery supply shall be calculated to operate its load in a supervisory mode for 48 hours with no primary power applied, and after that time, operate in its general alarm mode for 30 minutes. Batteries shall be sized at no larger than 75% of the calculated size to compensate for deterioration and aging during the battery life cycle.
- D. Battery Charger: Secondary power battery chargers shall be obtained from the emergency power panel board. Provide battery-charging circuitry for each standby battery bank in the system low voltage power supply or as a separate circuit. The charger shall be automatic in design, adjusting the charge rate to the condition of the batteries. Battery charge rate and terminal voltage shall be read using the fire alarm control panel LCD display in the service mode, indicating directly in volts and amps. Charger shall be housed in the main fire alarm control panel or the battery cabinet.

2.12 NOTIFICATION APPLIANCE PANEL (PAD):

- A. Provide notification appliance panels as a visual warning signal appliance and beam smoke detector power source. NAPS shall have the following features:
 - 1. 6 Amps or 8 Amps of regulated 24 VDC power output from 120 VAC input emergency power equipped with transient voltage surge suppression.
 - 2. 4 outputs, each rated at 3 AMPS. Do not load circuits beyond 2 AMP. Visual strobe

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circuits shall operate in a synchronized manner.

3. Battery supervision and charger management.
4. Secondary power capacity for 48 hours supervisory current and then 30 minutes in alarm.
5. Trouble supervisory output relay contacts to supervise low AC power, low battery condition, earth ground fault, auxiliary output power limit condition, EOL circuit supervision trouble.
6. Provide addressable interface modules to monitor general NAP trouble condition and report to Fire Control Panel.

2.13 LOAD CONTROL RELAYS:

Relays for the control of air handler contactors and elevator recall circuits shall be rated for use with circuits up to 240VAC at 7A inductive. Relays shall be of the sealed pluggable type, and terminations shall be made to pressure type screw terminals.

2.14 FIRE ALARM POWER TRANSIENT VOLTAGE SURGE PROTECTION (SP)

A. 120/240 Panel Protection

1. SP shall be listed in accordance with UL 1449 Second Edition to include Section 37.3 highest fault current category. SPD shall be UL 1283 listed.
2. SP shall provide surge current diversion paths for all modes of protection; L-N and L-G in WYE systems, and L-L, L-G in DELTA systems.
3. Each device shall be fused with a surge rated fuse and incorporate a thermal cutout device.
4. A dedicated breaker shall be provided as a means of disconnect for SP's.
5. SP shall meet or exceed the following criteria:
6. Minimum surge current capability (single pulse rated) per phase shall be:

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- a. 120/240 Panel Application 80kA per phase.
- b. UL 1449 Listed Suppression Voltage Ratings for service entrance shall not exceed the following:

VOLTAGE	L-N	L-G	MCOV
240/120V	400	400	150V

- 7. SP shall have a warranty for a period of five years, incorporating unlimited replacements of suppressor parts if they are destroyed by transients during the warranty period.

2.19 LINEAR DETECTION PANEL: (LDP)

Provide a linear detection panel located in the tunnel as shown in the drawings. The LDP shall be capable of servicing 20 zones of linear detection and shall be UL listed or FM approved for this use. The panel shall be equipped with 42 relays. Twenty relays shall be controlled by an alarm condition in the twenty zones of linear detection. Twenty relays shall activate upon the twenty detection zones system trouble. One relay shall monitor the panel for alarm and one relay shall monitor the panel for trouble. The panel shall be supplied by 120 volts from the emergency power supply step down transformer. A separate fused disconnect switch shall be provided for the panel. Battery back up shall be provided in accordance with the remainder of the fire alarm system.

2.20 LINEAR DETECTION:

Linear detection shall be a fixed temperature digital sensor capable of initiating an alarm once its rated activation temperature is reached. This action takes place at the first heated point anywhere along the detector length. The detectors shall be installed in a Class A configuration and shall be monitored by a linear detection panel manufactured by the company making the linear detectors. The linear detectors shall be provided throughout the Greenhouses as indicated in the drawings. The length of the linear detection shall be limited to the distances shown on the drawings. The distance between sensors and the installation shall meet NFPA 72 and the manufactures recommendations. The linear detection shall be rated for 88 degrees C (190 F). The outer coating shall be capable of enhancing weather performance in the presence of high temperature and UV conditions. A UV stabilizer shall be added to the outer coating. No splices shall occur in the linear detection except as recommended by the manufacturer. All transitions from linear detection to copper wire shall occur at the junction box specifically manufactured by the detection manufacturer. A strain reflect shall be provided for the linear detection entering the junction box.

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3.0 EXECUTION

3.01 PRIMARY POWER:

Provide primary power for the FACP, Transponder, and PAD panels, Transfer switch, from the Emergency service to the building where shown on the drawings. Power shall be 120 VAC service, transformed through a two-winding, isolation type transformer. The service disconnect switch shall be painted red, marked "FA", and provided with a lockable handle or cover. All 120 VAC primary power circuits shall be equipped with transient voltage surge suppression.

3.02 SYSTEM FIELD WIRING AND CONDUIT:

- A. Wiring Within Cabinets and Junction Boxes: Provide wiring installed in a neat and workmanlike manner and installed parallel with or at right angles to the sides and back of any box or cabinet
- B. Conductor Size: Wire size shall be sufficient to prevent voltage drop problems. Sizing of conductors shall be in accordance with the manufacturers wiring specifications for the system, except for minimum wire size shall be as follows with 600 VAC insulation.
 - 1. Initiation Device Circuits: 16AWG, solid copper twist shielded pair.
 - 2. Indicating Notification Appliance Circuits: 14AWG, solid copper, twisted shielded pair.
 - 3. 120VAC Circuits: 12AWG, solid copper.
 - 4. Interfaced Circuits: 16AWG, solid copper.
 - 5. Speaker Circuits: 14AWG, solid copper, twisted shielded pair.
 - 6. 24VDC Power: 14AWG, solid copper.
- C. Connectors: All conductors shall be terminated at a screwed connector on a securely mounted approved pressure type terminal block. The use of wire nuts or similar devices shall be prohibited.
- D. Terminal Cabinets: Provide a terminal cabinet at the base of any circuit riser, on each floor at each riser, and where indicated on the drawings. Cabinet size shall be appropriate for the size of the wiring to be connected. Sizes indicated are considered minimum.

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- E. Conductor Numbering: All conductors installed in the system shall be numbered at every junction point. Use a numbered shrink-wrap label designed specifically for this purpose. Wire numbers shall be the same as those designated on the as-built drawings. Mark each terminal in accordance with the wiring chart and diagrams of the system.
- F. Conductor Color Coding: Color coded conductors shall be consistent for each type of circuit, such as: (+) (-)
- Initiation Circuits: White w/red stripe / Black w/red stripe
Strobe Circuits Red w/white stripe: / Brown w/white stripe
Speaker Circuits: Yellow w/blue stripe / Violet w/white stripe
Interfaced equipment: Orange w/red stripe / Blue w/yellow stripe
(From interfacing equipment to the device being interfaced)
- G. Initiation and Indicating Notification Circuits:
1. Strobes are to be connected to circuits separate from speakers. This includes strobes and speakers that are mounted as a unit.
 2. Provisions for tying-in indicating and initiation circuits directly to the FACP motherboard (board containing CPU) shall not be used. Initiation and indicating circuits shall be tied to a separate electronic board before connection to the motherboard.
 3. Provide at least one unique and separate SLC circuit for each zone. Provide at least two unique and separate strobe and audio notification circuit for each zone. SLC, NAC and Audio Circuits shall not be shared between floors and zones. Provide spare capacity and circuits as specified.
- H. Circuit Loading:
1. Provide 20% spare capacity per circuit for notification indicating and initiation circuits. (i.e. an initiation circuit that can be loaded with 60 devices shall have no more than 48 devices. A strobe circuit or and audio circuit shall not be loaded past 80% of its power capacity.
 2. Circuits operating at 24VDC shall not operate at less than 21.6volts. Circuits operating at any other voltage shall not have a voltage drop exceeding 10% of nominal voltage.
- J. Conduit: Provide as specified
1. All conductors shall be in grounded metal conduit. Conduit shall be Rigid metal or

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EMT. Flexible metal conduit not exceeding six-foot lengths shall be permitted from junction box to notification indicating or initiating device. On flexible metal conduit, use only insulated throat connect. On EMT compression fillings shall be used.

2. Run conduit or tubing concealed unless specifically shown otherwise on the drawings.
3. All conduits in the Greenhouses shall be PVC.
4. Minimum conduit size shall be 3/4 " Trade size, unless noted otherwise.
5. All exposed conduit in the Headhouse below eight-feet shall be rigid conduit. Conduit exposed above 8-feet shall be EMT.

- K. Load Control Relays: All relays shall be supervised as required by NFPA 101 and mounted within one meter of the device controlled.

3.03 FIRE STOPPING:

Seal all holes caused by penetrating conduit, piping, or other penetrations, which pass through floors, walls or ceilings. Firestop penetrations through floor slabs, fire-rated walls, shafts, or any fire-rated assembly in accordance with Section 07841, Through-Penetrations Firestop Systems.

3.04 PAINTING:

All metal surfaces shall be painted. Metal conduit in finished areas shall be painted the color to match adjacent surfaces. Junction boxes in unfinished areas shall be painted full gloss enamel red. Conduit in unfinished area shall be painted with a red bands approximately every 30 feet.

3.05 INSTALLATION:

- A. FACP/Transponders/Auxiliary power supplies and linear detection panel: Locate the panel where indicated on the drawings. Surface mount the enclosure, with the top of the cabinet 6 ft above the finished floor or center the cabinet at 5ft 6 inches, (whichever is lower).
- B. Manual Pull Stations: Flush mount the manual pull stations so that their operating handles are 48 inches above the finished floor. Greenhouse pull stations shall be weatherproof.
- C. Visual Warning Signal Strobes: Flush mount strobes on walls 80 inches above the finished floor or 6 inches below the ceiling whichever is lower.

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- D. Speakers: Speakers should typically be set on the 1/2 watt tap. Speakers in areas with higher ambient noise levels such as mechanical rooms and machine shops shall be set on the 1 watt tap. Flush mount 80 inches above finished floor. Weather proof speakers in Greenhouses shall be on the 4 watt tap.
- E. Smoke Detectors:
 - 1. Install smoke detectors no closer than 4 ft from air handling supply outlets.
 - 2. Photoelectric type detectors shall be installed in elevator machine rooms and elevator hoist ways.

3.06 TESTING

Preliminary testing: Notify AOC prior to performing preliminary testing. Contractor shall conduct the following test during installation of wiring and system components. Any deficiency pertaining to these requirements shall be corrected by the Contractor prior to final acceptance testing of the system. Record results of testing. Submit all test results to the AOC.

- A. Ground resistance: Prior to connecting control, tests grounds for ground resistance value . Use a portable ground testing megger to test each ground or group of grounds. Make ground resistance measurements in normally dry weather, not less than 48 hours after a rainfall. Follow the directions provided by the equipment manufacturer for proper use of the equipment. Measure resistance of each connection to ground. Resistance of each connection to ground shall not exceed 10 ohms.
- B. Operation of Entire System: Operate all initiating and indicating devices.
- C. Final Acceptance Testing: The Contractor shall notify the AOC when the system is ready for final acceptance testing. Request scheduling for final acceptance testing only after all necessary preliminary tests have been made and all deficiencies found have been corrected to the satisfaction of the equipment manufacturer's technical representative and the AOC, and written certification to this effect has been received by the Fire Protection Engineer. The system shall be in service at least 15 calendar days prior to final acceptance testing. The Contractor shall allow at least 15 calendar days between the date final testing is requested and the date the final acceptance testing takes place.
 - 1. The Contractor shall furnish all appliances, equipment, instruments, devices and personnel for this test. Furnish a minimum of three two-way radios plus one additional radio for each remote annunciator, all operating on the same frequency. The system shall be tested for approval in the presence of representatives of the manufacturer, the AOC, and the Fire Marshal's office. All necessary tests shall be made

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and any deficiency found shall be corrected and the system retested.

2. Entire System: Test the entire system by operating all fire alarm initiating, notification, and signaling devices. Perform tests with the system operating on primary power and repeat the test with the system operating on battery power only. Provide necessary equipment to test smoke detectors and heat detectors.

End of Section 13852

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SECTION 16010 -ELECTRICAL GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this section.

1.2 SCOPE:

- A. Work under this section consists of furnishing and installing everything necessary for and incidental to the execution and completion of all electrical work as indicated on the drawings and specified herein.
- B. It is the intention of the Specification and drawings to call for finished work, tested and ready for operation. Wherever the words, "Furnish" or "Provide" are used, it shall mean provide and install complete and ready for use. Any apparatus, material or work not shown on drawings but mentioned in the Specification, or vice versa, or any incidental accessories necessary to make the work complete and perfect in all respects and ready for operation, even if not particularly specified shall be furnished, delivered and installed by the Contractor without additional expense to the Architect. Phenolic plates shall be mounted by means of stainless steel sheet metal screws. Letters shall be a minimum of 3/8" high.

1.3 SUBMITTALS:

- A. Specific items requiring submittals shall be as specified in each individual section of Division 16. Shop drawings shall be submitted and approved before procurement, fabrication, or delivery of such items to the job site. Partial submittals are not acceptable; such submittals will be returned without review.
 - 1. Manufacturer's Data: Submittals for each manufactured item shall be manufacturer's descriptive literature, equipment drawings, diagrams, performance and characteristic curves, and catalog cuts. Each submittal shall include the manufacturer's name, trade name, catalog model or number, nameplate data, size, layout dimensions, capacity, specification reference, applicable Federal, Military and industry specification references, and all other information necessary to establish contract compliance. Supply six (6) sets of submittals.
 - 2. Shop or Working Drawings: Drawings shall be 30 inches x 42 inches in size and show types, sizes, accessories, elevations, floor plans, sectional views,

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installation details, elementary diagrams, and wiring diagrams. Wiring diagrams shall identify circuit terminals and shall indicate the internal wiring for each item of equipment and the interconnection between the items. Drawings shall also indicate adequate clearance for operation, maintenance and replacement of operating equipment devices. If any equipment is disapproved, the drawings shall be revised to show acceptable equipment and be resubmitted. Supply six (6) sets of drawings.

1.4 CODES AND STANDARDS:

- A. The work and equipment shall comply with all local codes and the following codes and standards:
 - 1. National Electrical Code (NEC), NFPA No. 70, 2002
 - 2. National Electrical Safety Code (NESC), ANSI C2
 - 3. National Fire Alarm Code, NFPA No. 72, 2002
 - 4. Occupational Safety and Health Administration (OSHA) 1910 & 1926

1.5 STANDARDS COMPLIANCE:

- A. When materials or equipment must conform to the standards of organizations such as the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), National Electrical Manufacturers Association (NEMA), and Underwriters Laboratories (UL), proof of such conformance shall be submitted to the Architect for approval. If an organization uses a label or listing to indicate compliance with a particular standard, the label or listing will be acceptable evidence, unless otherwise specified in the individual sections. In lieu of the label or listing, the Contractor shall submit a certificate from an independent testing organization, which is competent to perform acceptable tests and is approved by the Architect.

The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item conforms to the specified organization's standard. For materials and equipment whose compliance with organization standards or specifications is not regulated by an organization using its own listing or label as proof of compliance, a certificate of compliance from the manufacturer shall be submitted for approval. The certificate shall identify the manufacturer, the product, and the referenced standard and shall simply state that the manufacturer certifies that the product conforms to all requirements of the project specification and of the referenced standards listed.

- B. CERTIFIED TEST REPORTS: Before delivery of materials and equipment, certified

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copies of all test reports specified in the individual sections shall be submitted for approval.

- C. Any electrical equipment using dielectric fluid shall be certified "PCB free". This includes but is not limited to transformers, switchgear, light ballasts etc. Contractor shall submit to the Architect for approval any equipment using dielectric fluid other than silicone.

1.6 OPERATIONS AND MAINTENANCE MANUAL:

- A. The Contractor shall furnish an operation and maintenance manual for each electrical system and for each piece of equipment, (unless otherwise specified herein). Four copies of the complete manual bound in hardback binders or an approved equivalent shall be provided to the Architect. One manual shall be furnished prior to the time that system or equipment tests are performed, and the remaining manuals shall be furnished before the contract is completed. The following identification shall be inscribed on the cover: the words "OPERATING AND MAINTENANCE MANUAL", the name and location of the building, the name of the Contractor, and the contract number. The manual shall include the names, addresses, and telephone numbers of each subcontractor installing equipment and systems and of the local representatives for each item of equipment and each system. The manual shall have a table of contents and be assembled to conform to the table of contents with the tab sheets placed before instructions covering the subject. The instruction sheets shall be legible with large sheets of drawings folded in.

The manual shall include, but not be limited to, the following: a system layout showing circuits, devices and controls; wiring and control diagrams with data to explain detailed operation and control of each component; a control sequence describing start-up, operation and shut-down; a detailed description of the function of each principal component of the system; the procedure for starting; the procedure for operating; shut-down instructions; installation instruction maintenance and overhaul instructions; lubrication schedule including type, grade, temperature range, and frequency; safety precautions, diagrams, and illustrations; test procedures; performance data; and parts list. The parts list for equipment shall indicate the source of supply, recommended spare parts, and the service organization which is reasonably convenient to the building site. The manual shall be complete in all respects for all equipment, controls, and accessories provided.

1.7 POSTED OPERATING INSTRUCTIONS:

- A. Operating instructions approved by the Architect shall be provided for each system and each principal piece of equipment for the use of operation and maintenance personnel. The operating instructions shall include wiring and control diagrams showing the complete layout of the entire system, including equipment, devices, control sequence,

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and lockout devices required to conduct safe maintenance and repair. Operating instructions shall be printed or engraved and shall be framed under glass or in approved laminated plastic and posted where directed by the Architect. Operating instructions shall be attached to or posted adjacent to each principal piece of equipment and shall include such instructions as start-up, proper adjustment, operating, lubrication, shut-down, safety precautions, procedure in the event of equipment failure, and any other necessary items of instruction as recommended by the manufacturer of the unit. Operating instructions exposed to the weather shall be made of weather-resisting materials or shall be suitably enclosed to be weather protected. Operating instructions shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

1.8 INSTRUCTION TO GOVERNMENT PERSONNEL:

- A. When specified in other sections, the Contractor shall furnish the services of competent instructors who will give full instruction to the designated personnel in the adjustment, operation, and maintenance, including pertinent safety requirements, of the equipment or system specified. Each instructor shall be thoroughly familiar with all parts of the installation and shall be trained in operating theory as well as practical operation and maintenance work. Instruction shall be given during the first regular work week after the equipment or system has been accepted and turned over to the Government for regular operation. The number of man-days (8 hour day) of instruction furnished shall be as specified in other sections. When more than 4 man-days of instruction are specified, approximately half of the time shall be used for classroom instruction. All other time shall be used for instruction with the equipment or system. When significant changes or modifications in the equipment or system are made under the term of the contract, additional instruction shall be provided to acquaint the operating personnel with the changes or modifications.

1.9 DELIVERY AND STORAGE:

- A. Equipment and materials shall be properly stored and adequately protected and carefully handled to prevent damage before and during installation. Equipment and materials shall be handled, stored, and protected in accordance with the manufacturer's recommendations and as approved by the Architect. Electrical conduit shall be stored to provide protection from the weather and accidental damage. Cables shall be sealed, stored and handled carefully to avoid damage to the outer covering or insulation and damage from moisture and weather. Damaged or defective items, in the opinion of the Architect, shall be replaced with new items at no cost to the Government.

1.10 CONSTRUCTION POWER AND LIGHTING:

- A. Contractor shall provide and maintain construction power and lighting as required to

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execute the work.

- B. Contractor shall provide all secondary equipment, circuits, lights, lamps and miscellaneous devices required to provide safe and practical OSHA and NEC complying light and power for construction purposes.
- C. All temporary power and lighting shall be removed after completion of work.

1.11 AS-BUILT DRAWINGS:

- A. As construction progresses, Contractor shall keep up-to-date a set of as-built marked-up drawings. After construction is complete, this Contractor shall transfer the as-built marks to a set of reproducible mylar drawings. The as-built reproducible drawings shall be delivered to, and shall become the property of, the Architect.
- B. As-built drawings shall be maintained at job site during construction.
- C. In addition, the Contractor shall supply a set of wiring diagrams which shall indicate all terminal strips to which any wiring has been connected.
- D. Delivery of as-built reproducible drawings to the Architect shall be made prior to the date of Substantial Completion of the work and prior to final Architect acceptance.

1.12 MEASUREMENTS:

- A. Contractor shall base all measurements, both horizontal and vertical from established bench marks. All work shall agree with these established lines and levels. Contractor shall verify all measurements at site, and check the correctness of same as related to the work. Should the Contractor discover any discrepancy between actual measurements and those indicated which prevent following good practice of the intent of the drawings and specifications, he shall notify the Architect and shall not proceed with his work until he has received instructions from the Architect.

1.13 DRAWINGS:

- A. Drawings are diagrammatic and indicate the general arrangement of systems and work included in the Contract. Contractor shall follow drawings in laying out work, check drawings of all trades to verify spaces in which work will be installed, and maintain maximum headroom and space conditions at all points. Where headroom or space conditions appear inadequate, the Architect shall be notified before proceeding with installation. If directed by the Architect, the Contractor shall, without extra charge, make reasonable modifications in the layout as needed to prevent conflict with work of various trades or for the proper execution of the work. Where variances occur between

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the drawings and the specifications, or within either document itself, the item or arrangement of better quality, greater quantity, or higher cost shall be included in the Contract price. The Architect will decide on the item and manner in which the work shall be installed.

1.14 COOPERATION:

- A. Contractor shall require full cooperation between trades and shall furnish (in writing, with copies to Architect) any information necessary to permit the work of all trades to be installed satisfactorily and with least possible interference or delay. Where the work of one Subcontractor work which will be installed in close proximity to work of other trades, or where there is evidence that the work of the one will interfere with work of others, he shall assist in working out space conditions to make a satisfactory adjustment.

If so directed by the Architect, the Subcontractor shall prepare composite working drawings and sections at a suitable scale not less than 1/4 inch equals 1 foot 0 inches clearly showing how this work is to be installed in relation to the work of other trades or so as not to cause any interference with work of other trades. He shall make necessary changes in his work to correct the condition without extra charge.

1.15 PROTECTION:

- A. Contractor shall protect the work and material of all trades from damage by his work or workmen, and shall make good all damage thus caused. Contractor shall be responsible for work and equipment until finally inspected, tested, and accepted: protect work against theft, injury or damage., and carefully store materials and equipment received on site which are not immediately installed. He shall close open ends of work with temporary covers or plugs during construction to prevent entry of obstructive material.

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1.16 SINGULAR NUMBER:

- A. Where any device or part of equipment is herein referred to in the singular number (such as "the bell"), such reference shall apply to as many such devices as are required to complete the installation as shown on the drawings.

PART 2 - PRODUCTS

2.1 PRODUCTS AND EQUIPMENT:

- A. All electrical devices, such as panelboards, safety switches, starters, etc., furnished by this or other trades, shall be permanently or legibly marked. Marking methods shall be with engraved laminated black and white phenolic legend plates. Legend plates shall be laminated to show black engraving on surrounding white. Markings shall be as directed by the AOC. Phenolic plates shall be mounted by means of stainless steel sheet metal screws. Letters shall be a minimum of 3/8" high.

2.2 NEW AND UNUSED:

- A. All products for permanent construction shall be new and unused, with the exception of specific equipment indicated to be reused on the contract drawings.
- B. Material for construction power and lighting, to be removed at completion of project construction, may be "used" material.

2.3 CATALOG CUTS AND SHOP DRAWINGS:

- A. This Contractor shall submit, for approval, catalog cuts and/or shop drawings on all products which the Contractor intends to use.
- B. Materials and equipment shall be the cataloged products of manufacturers regularly engaged in production of such materials or equipment and shall be manufacturer's latest standard design that complies with the specification requirements.

When two or more units of the same type, class, and size of equipment are required, these units shall be products of a single manufacturer; however, the component parts of the system need not be the products of the same manufacturer. Each major component of equipment shall have the manufacturer's name, address, and the model and serial number on a nameplate securely affixed in a conspicuous place; the nameplate of the distributing agent will not be acceptable.

- C. Submission of shop drawings shall be in accordance with Division 1 and be complete in all technical details.

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- D. Such submittals shall include, in addition to the requirements of the Special Conditions, identification of:
 - 1. Specification Section Number (five digits).
 - 2. Equipment designation.

PART 3 - EXECUTION

3.1 MANUFACTURER'S RECOMMENDATIONS:

- A. Where installation procedures are specified to be in accordance with the recommendations of the manufacturer of the material or equipment being installed, printed copies of these recommendations shall be furnished to the AOC prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

3.2 MECHANICAL REQUIREMENTS:

- A. The interconnecting power wiring and conduit, control wiring rated 100 volts (nominal) and conduit, the motor-control equipment forming a part of motor-control centers, of switchgear assemblies, and the electrical power circuits are included under this division. The electrical components of mechanical equipment, such as motors, motor starters, control or push-button stations, float or pressure switches, solenoid valves, and other devices functioning to control mechanical equipment, and control wiring and conduit for circuits rated 100 volts or less are specified in the appropriate sections covering such work rather than in Division 16.

3.3 ACCESS TO EQUIPMENT:

- A. All equipment shall be installed in location and manner that will allow for convenient access for maintenance and inspection, as well as application of locks and tags during Lockout/Tagout Procedures.

3.4 CONNECTION OF EQUIPMENT FURNISHED AND INSTALLED UNDER OTHER DIVISIONS OF THE WORK:

- A. The Contractor shall rough-in and make final electrical connection to all pieces of equipment requiring electrical connections, such equipment being furnished and installed under other Divisions of the work.
- B. All work shall be carefully laid out in advance coordinating electrical features with

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architectural, structural, and mechanical features of construction. Advise AOC of any discrepancy before performing any work.

- C. Installations shall be functional and shall comply with all applicable codes.
- D. The Contractor shall provide whatever incidental devices and equipment are necessary for final connection, such as, but not necessarily limited to:
 - 1. Boxes.
 - 2. Connectors.
 - 3. Clamps.

3.5 GENERAL:

- A. All painting in finished areas shall be done under another Division. The contractor shall, under this Division, clean and remove all rust, scale, oil, grease and dirt and leave in a condition for painting all surfaces or material or equipment under this Division which are to be painted or covered.

3.6 EXECUTION:

- A. Each branch circuit and each feeder shall be tagged in each panelboard gutter and in all pull or junction boxes, wire trough, etc. Tags in panelboard gutters shall indicate area and equipment served by the circuit and shall exactly match the panelboard directory label. Tags for branch circuits shall be printed on cloth or vinyl plastic with self-stick pressure adhesive, as manufactured by W.H. Brady Company. Feeders shall be tagged in each large pull box or wire trough with engraved fiber tags.
- B. All ferrous materials that are concealed, or exposed in unfinished areas, such as straps, hangers, junction boxes, pull boxes, etc., and are not galvanized or finished with a factory finish shall be painted under this section with one coat of zinc-chromate primer and one finish coat of aluminum of Pratt and Lambert Noxider or Rust-Oleum. Non-ferrous materials shall be cleaned only and left unpainted.
- C. Equipment which is furnished with a final factory finish shall have finish carefully touched-up where it is scratched or otherwise damaged. Touch-up work shall be done in same color and type as original finish.

-END OF SECTION 16010-

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SECTION 16402 - INTERIOR WIRING SYSTEM

PART 1 - GENERAL

1.1 APPLICABLE PUBLICATIONS:

- A. The following publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATIONS:
 - 1. C80.1 Specifications for Rigid Steel Conduit, Zinc-Coated
 - 2. C80.3 Specification for Electrical Metallic Tubing, Zinc-Coated
- C. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM) PUBLICATION:
 - 1. B 1 Hard-Drawn Copper Wire
- D. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) PUBLICATION:
 - 1. 70 National Electrical Code (NEC), 2002
- F. UNDERWRITERS' LABORATORIES, INC. (UL) PUBLICATIONS:
(All UL Publications shall be current editions published and available in print on the date of advertisement of this contract.)
 - 1. 1 Flexible Metal Conduit
 - 2. 50 Cabinets and Boxes
 - 3. 67 Panelboards
 - 4. 360 Liquid-Tight Flexible Steel Conduit
 - 5. 467 Grounding and Bonding Equipment
 - 6. 486A Wire Connectors and Soldering Lugs for Use with Copper Conductors
 - 7. 486C Splicing Wire Connectors

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- | | | |
|-----|-----|---|
| 8. | 489 | Molded-Case Circuit Breakers and Circuit Breaker Enclosures |
| 9. | 510 | Insulating Tape |
| 10. | 514 | Outlet Boxes and Fittings |

1.2 GENERAL REQUIREMENTS:

- A. Section 16010, "Electrical General Requirements," applies to this section with additions and modifications specified herein. In each of the standards referred to herein, consider the advisory provisions to be mandatory, as though the word "shall" had been substituted for "should" wherever it appears. Interpret reference in these standards to the "authority having jurisdiction", or words of similar meaning, to mean the Contracting Officer.

1.3 SUBMITTALS:

A. MANUFACTURERS' DATA:

1. Conduit and fittings (each type)
2. Insulated conductors
3. Outlet, junction and pull boxes
4. Device plates
5. Multi-Conductor Cable

B. SHOP DRAWINGS:

1. As-Built Conduit and Wiring Construction

PART 2 - PRODUCTS

- 2.1 MATERIALS AND EQUIPMENT, GENERAL: All materials, equipment, and devices shall, as a minimum, meet the requirements of UL where UL Standards are established for those items, and the requirements of the NFPA 70. All items shall be new unless specified or indicated otherwise.

2.2 CONDUIT AND FITTINGS:

- A. Rigid Steel Conduit (Zinc-Coated): ANSI C80.1

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- B. Electrical Metallic Tubing (EMT): ANSI C80.3
 - C. Flexible Metal Conduit: UL 1
 - D. Fittings for Metal Conduit, Electrical Metallic Tubing and Flexible Metal conduit: UL 514. All ferrous fittings shall be cadmium- or zinc-coated in accordance with UL 514.
 - 1. Fittings for rigid metal conduit shall be the threaded type. Split couplings are not acceptable.
 - 2. Fittings for electrical metallic tubing (EMT) shall be the compression type.
- 2.3 OUTLET BOXES AND COVERS:
- A. UL 514, cadmium- or zinc-coated if of ferrous metal.
- 2.4 CABINETS, JUNCTION BOXES, AND PULL BOXES (WITH VOLUME GREATER THAN 100 CUBIC INCHES):
- A. UL 50, hot-dip zinc-coated if of sheet steel.
- 2.5 WIRES AND CABLES:
- A. Wires and cables shall meet the applicable requirements of NFPA 70 and UL for the type of insulation, jacket, and conductor specified or indicated. Wires and cables manufactured more than 12 months prior to date of delivery to the site shall not be used.
 - B. CONDUCTORS: Conductors No. 10 AWG and smaller shall be solid, and those No. 8 AWG and larger shall be stranded. Unless indicated otherwise, conductor sizes shown are based on copper. All conductors shall be copper.
 - 1. Minimum Conductor Sizes: Fire protection circuit minimum conductor sizes shall be in accordance with manufacturer's recommendations except no conductor shall be less than 16 AWG.
 - 2. Color Coding: Shall match the existing system wiring.
 - C. SPLICES AND TERMINATION COMPONENTS: UL 486A for wire connectors, and UL 510 for insulating tapes. Connectors for wires No. 10 AWG and smaller shall be insulated pressure-type in accordance with UL 486A or UL 486C (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors. All terminations in the fire alarm system side of the fire alarm control panels, transponders, notification

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appliance extender panels, shall be at terminal strips. Wiring in and out of the terminal box and the terminal strips shall be identified with reference to a table listing.

- D. **CIRCUIT BREAKERS:** Circuit breakers shall meet Fed. Spec. W-C-375 and be listed in accordance with UL 489, thermal magnetic type with interrupting capacity of 10,000 amperes symmetrical minimum. Breaker terminals shall be UL listed as suitable for the type of conductor provided. Provide bolt on circuit breakers. Plug-in circuit breakers are not acceptable.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. **GENERAL REQUIREMENTS:** Electrical installations shall conform to the requirements of NFPA 70 and to the requirements specified herein.
- B. **WIRING METHODS:** Wiring method shall be insulated conductors installed in conduit, except where specifically indicated or specified otherwise, or required by NFPA 70 to be installed otherwise. An insulated equipment grounding conductor shall be provided in all feeder and branch circuits, including fire alarm system power supply circuits.
1. Aluminum Conduit: Do not use
 2. Electrical Metallic Tubing:
Do Not:
 - a. Use in feeder circuits
 - b. Install underground
 - c. Encase in concrete
 - e. Use in areas where subject to severe physical damage
 - f. Use in hazardous areas
 - g. Use in outdoor work
 - h. Use in sizes larger than 2 inches
 3. PVC Conduit shall only be used in the greenhouses. All other areas including tunnels shall be as indicated above.
 4. Flexible Metal Conduit may be used in concrete block walls for notification and initiating devices in lieu of channeling the wall.
- C. **CONDUIT INSTALLATION:** Unless indicated otherwise, conceal conduit within finished walls, ceilings, and floors.
1. Contractor shall cut, channel, chase all walls and ceilings in order to conceal as

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required. All patching, painting and refinishes shall be provided and performed by the appropriate trade mechanics required and in accordance with these specifications. Keep conduit at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install conduit parallel with or at right angles to ceilings, and structural members where located above accessible ceilings and where conduit will be visible after completion of project. Conduits in non-public areaways, basements mechanical and electrical rooms shall be run exposed. In mechanical rooms, shops, etc. all conduit below 8ft shall be rigid steel conduit. All conduit above 8ft. shall be in EMT with compression fittings.

2. Conduit Support: Support conduit by pipe straps, wall brackets, hangers, or ceiling trapeze. Fasten by wood screws to wood; by toggle bolts on hollow masonry units; by concrete inserts or expansion bolts on concrete or brick; by machine screws, welded threaded studs, or spring-tension clamps on steel work. Threaded C-clamps may be used on rigid steel conduit only. Do not weld conduits or pipe straps to steel structures.

The load applied to fasteners shall not exceed one-fourth of the proof test load. Fasteners attached to concrete ceiling shall be vibration and shock resistant. Holes cut to a depth of more than 1-1/2 inches in reinforced concrete beams or to a depth of more than 3/4 inch in concrete joints shall not cut the main reinforcing bars. Fill holes that are not used. In partitions of light steel construction, use sheet-metal screws.

In suspended-ceiling construction, run conduit above the ceiling and fasten only fire alarm system branch circuit conduits to the ceiling supports. Spring steel fasteners may be used for fire alarm circuit conduit supports in suspended ceiling in dry locations.

3. Make changes in direction of runs with symmetrical bend or cast-metal fittings. Make field-made bends and offsets with a hickey or conduit-bending machine. Do not install crushed or deformed conduits. Avoid trapped conduits. Prevent plaster, dirt, or trash from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of all obstructions.
4. Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by NFPA 70, where insulated bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, use at least a single locknut and bushing. Locknuts shall be the type with sharp edges for digging into the wall of metal enclosures. Install bushings on the ends of conduits and provide insulating type where required by NFPA 70.
5. Flexible connections of short length (maximum of 6 feet) shall be provided for

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equipment subject to vibration, noise transmission, or movement; and for all motors. Liquid-tight flexible conduit shall be used in wet locations. A separate ground conductor shall be provided across flexible connections.

6. Install pull wires in empty conduits in which wire is to be installed by others. The pull wire shall be No. 14 AWG zinc-coated steel or plastic having not less than 200-pound tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.
7. Fire Alarm and Signal System Conduits: Install in accordance with the previous requirements for conduit and with the additional requirement that no length of run shall exceed 150 feet for trade sizes 2 inches and smaller and shall not contain more than four 90-degree bends or the equivalent. Provide pull or junction boxes where necessary to comply with these requirements. Inside radii of bends in conduits one-inch trade size and larger shall be not less than two times the nominal diameter. Terminate conduit in terminal cabinet control panels and pull boxes with two locknuts and a plastic bushing. All wiring in terminal boxes shall be identified.

- D. **BOXES, OUTLETS, AND SUPPORTS:** Provide boxes in the wiring or raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for metallic raceways shall be of the cast-metal hub type when located in normally wet locations, when surface mounted on outside of exterior surfaces, when installed exposed up to 7 feet above interior floors and walkways, and when installed in hazardous areas. Boxes in other locations shall be sheet steel. Each box shall have the volume required by NFPA 70 for the number of conductors enclosed in the box. Boxes for use in masonry-block or tile walls shall be square-cornered tile-type, or standard boxes having square-cornered tile-type covers.

Fasten boxes and supports with wood screws on wood, with bolts and expansion shields on concrete or brick, with toggle bolts on hollow masonry units, and with machine screws or welded studs on steel work. Threaded studs (etc.) driven in by powder charge may not be used. In open overhead spaces, cast boxes threaded to raceways need not be separately support except where used for fire alarm devices (mounting box) support. Support sheet metal boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceways on opposite sides of the box and support the raceway with an approved type of fastener not more than 24 inches from the box. When penetrating reinforced-concrete members, avoid cutting any reinforcing steel.

1. Boxes for use with raceway systems shall not be less than 1-1/2 inches deep, except where shallower boxes required by structural conditions are approved. Boxes shall be not less than 4 inches square, except that 4 inch by 2 inch boxes may be used where only one raceway enters the outlet.

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2. Pull Boxes: Construct of not less than the minimum size required by NFPA 70 of code-gage aluminum or galvanized sheet steel, except where cast-metal boxes are required in locations specified above. Furnish boxes with screw-fastened covers. Where several feeders pass through a common pull box, tag the feeders to indicate clearly the electrical characteristics, circuit number, and panel designation.
3. Extension rings shall not be used on new boxes on concealed conduit systems.
4. In greenhouse areas all boxes shall be PVC weatherproof.
- E. MOUNTING HEIGHTS: Mount other devices as indicated unless otherwise specified. Measure mounting heights of wiring devices and outlets to the center of device or outlet.
- F. CONDUCTOR IDENTIFICATION: Provide conductor identification within each enclosure where a tap, splice, or termination is made. Color coding shall be by factory-applied color-impregnated insulation.
- G. SPLICES: Make splices in accessible locations. Make splices in conductors No. 10 AWG and smaller with an insulated pressure type connector. Splicing for fire alarm system alarm initiating and alarm indicating circuits is prohibited except by means of terminal strips or blocks, utilizing screw type terminals, located in properly sized junction or pull boxes or within the fire alarm control panel.
- H. COVERS AND DEVICE PLATES: Install with all four edges in continuous contact with finished wall surfaces without the use of mats or similar devices. Plaster fillings will not be permitted. Plates shall be installed with an alignment tolerance of 1/16 inch. The use of sectional type device plates will not be permitted. Plates installed in wet locations shall be gasketed.
- I. EXISTING EQUIPMENT TO REMAIN: The Contractor shall make connections to this equipment to make it operate as intended, including providing miscellaneous items such as plugs, receptacles, wire, cable, conduit, flexible conduit, and outlet boxes or fittings.
- J. REPAIR OF EXISTING WORK: Lay out the work carefully in advance. Where cutting, channeling, chasing, or drilling of floors, walls, partition, ceilings, or other surfaces is necessary for the proper installation, support, or anchorage of the conduit, raceways, or other electrical work, do this work carefully. Repair any damage to buildings, piping, or equipment using skilled mechanics of the trades involved.
 1. Painting and Finishing: Painting exposed surfaces shall be per other sections covering the particular item or as shown.

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3.2 FIELD TESTS:

- A. The Contractor shall provide all test equipment and personnel and submit written copies of all test results. As an exception to requirements that may be stated elsewhere in the contract, the Contracting Officer shall be given 5 working days notice prior to each test.
- B. Devices Subject to Manual Operation: Each device subject to manual operation shall be operated at least five times, demonstrating satisfactory operation each time.

-END OF SECTION 16402-

ATTACHMENTS

General Decision Number: DC030003 05/05/2006 DC3
Superseded General Decision Number: DC020003
State: District of Columbia
Construction Type: Building
County: District of Columbia Statewide.
BUILDING CONSTRUCTION PROJECTS (Does not include single family
homes and apartments up to and including 4 stories)
Modification Number Publication Date

0 06/13/2003
1 10/03/2003
2 10/31/2003
3 01/09/2004
4 03/19/2004
5 04/02/2004
6 05/14/2004
7 06/11/2004
8 06/18/2004
9 06/25/2004
10 07/02/2004
11 07/09/2004
12 07/16/2004
13 08/13/2004
14 08/20/2004
15 09/17/2004
16 09/24/2004
17 10/29/2004
18 11/12/2004
19 01/21/2005
20 04/01/2005
21 05/06/2005
22 06/03/2005
23 06/10/2005
24 06/24/2005
25 07/01/2005
26 07/08/2005
27 07/22/2005
28 08/19/2005
29 08/26/2005
30 09/16/2005
31 10/28/2005
32 11/04/2005
33 11/11/2005
34 11/25/2005
35 02/03/2006
36 03/10/2006
37 05/05/2006

ASBE0024-001 03/01/2006

Rates Fringes

Asbestos Worker/Heat and
Frost Insulator

Includes the application
of all insulating
materials, protective
coverings, coatings and
finishes to all types of
mechanical systems.....\$ 25.88 12.88

ASBE0024-002 03/01/2006

Rates Fringes

Hazardous Material Handler
Includes preparation,

wetting, stripping,
removal, scrapping,
vacuuming, bagging and
disposing of all
insulation materials,
whether they contain
asbestos or not, from
mechanical systems.....\$ 14.22 6.35

ASBE0024-005 03/01/2006

Rates Fringes

Fire Stop Technician

Includes the application
of materials or devices
within or around
penetrations and openings
in all rated wall or floor
assemblies, in order to
prevent the passage of
fire, smoke or other
gases. The application
includes all components
involved in creating the
rated barrier at perimeter
slab edges and exterior
cavities, the head of
gypsum board or concrete
walls, joints between
rated wall or floor
components, sealing of
penetrating items and
blank openings.....\$ 20.94 6.09

BRDC0001-001 11/06/2005

Rates Fringes

Bricklayer.....\$ 25.25 6.09

CARP0132-006 05/01/2005

Rates Fringes

Carpenter (Including Drywall

Hanging).....\$ 22.89 5.39

Piledriver.....\$ 21.47 5.81

ELEC0026-003 09/02/2002

Rates Fringes

Communication Technician.....\$ 20.60 5.09

SCOPE OF WORK: Includes low voltage construction,
installation, maintenance and removal of teledata
facilities (voice, data and video) including outside plant,
telephone and data inside wire, interconnect, terminal
equipment, central offices, PABX, fiber optic cable and
equipment, railroad communications, micro waves, VSAT,
bypass, CATV, WAN (Wide area networks), LAN (Local area
networks) and ISDN (Integrated systems digital network).
WORK EXCLUDED: The installation of computer systems in
industrial applications such as assembly lines, robotics
and computer controller manufacturing systems. The
installation of conduit and/or raceways shall be installed
by Inside Wiremen. On sites where there is no Inside
Wireman employed, the Teledata Technician may install
raceway or conduit not greater than 10 feet. Fire alarm

work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit. All HVAC control work.

* ELEC0026-016 11/07/2005

Rates Fringes

Electrician (Excluding
Communication-Low Voltage

Wiring).....\$ 30.45 10.35+3%+a

a. PAID HOLIDAYS: New Year's Day, Martin Luther King Jr.'s Birthday, Inauguration Day, Memorial Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day or days designated as legal holidays by the Federal Government.

ENGI0077-009 05/01/2006

Rates Fringes

Power equipment operators:

Boom Trucks.....\$ 25.52 6.42+a

Cranes (35 tons and above)..\$ 26.69 6.42+a+b

Cranes (under 35 tons).....\$ 26.23 6.42+a+b

Forklifts.....\$ 18.95 6.42+a

Piledrivers.....\$ 26.23 6.42+a

a. PAID HOLIDAYS:

New Years Day, Inaugural Day, Decoration Day, Independence Day, Labor Day, Martin Luther King's Birthday, Veterans Day, Thanksgiving Day, Friday after Thanksgiving and Christmas Day.

b. PREMIUM PAY:

Tower cranes and cranes 100-ton and over to receive \$1.00 per hour premium over Group One.

IRON0005-001 06/01/2005

Rates Fringes

Ironworkers:

Structural, Ornamental and

Chain Link Fence.....\$ 24.53 10.795

* IRON0201-003 05/01/2005

Rates Fringes

Ironworker, Reinforcing.....\$ 24.45 9.73

LABO0074-001 06/01/2005

Rates Fringes

Laborer: Skilled.....\$ 18.03 3.12

FOOTNOTE: Potmen, power tool operator, small machine operator, concrete labor including concrete preparation, signalmen, laser beam operator, waterproofer, open caisson, test pit, underpinning, pier hole and ditches, ladders and all work associated with lagging that is not expressly stated, strippers, operator of hand derricks, vibrator operators, pipelayers, or tile layers, operators of jackhammers, paving breakers, spaders or any machine that does the same general type of work, scaffold builders, operators of towmasters, scootcretes, buggymobiles and other machines of similar character, operators of tampers and rammers, and other machines that do the same general type of work, whether powered by air, electric or gasoline builders of trestle scaffolds over one tier high and sand blasters, power and chain saw operators used in clearing, installers of well points, wagon drill operators, acetylene

burners and licensed powdermen.

LAB00456-012 06/01/2005

Rates Fringes

Laborers:

Mason Tenders (Brick).....\$ 13.75 3.12

Mortarmen, Scaffold

Builders.....\$ 14.45 3.12

MARB0002-002 05/01/2005

Rates Fringes

Marble & Stone Mason.....\$ 28.72 10.55

INCLUDES pointing, caulking and cleaning of All types of

masonry, brick, stone and cement structures; EXCEPT

pointing, caulking and cleaning of exisiting masonry,

brick, stone and cement (restoration work)

MARB0003-001 05/01/2005

Rates Fringes

Mosaic & Terrazzo Worker,

Tile Layer.....\$ 23.17 8.53

MARB0003-004 05/01/2005

Rates Fringes

Marble, Tile & Terrazzo

Finisher.....\$ 18.72 7.62

PAIN0051-004 06/01/2005

Rates Fringes

Glazier

Contracts \$2,000,000 and

under.....\$ 21.87 7.21

Contracts over \$2,000,000...\$ 23.09 7.21

PAIN0051-010 06/01/2005

Rates Fringes

Painters:

Brush, Roller, Spray and

Drywall Finishers.....\$ 21.31 7.06

PLAS0891-003 05/01/2004

Rates Fringes

Cement Mason.....\$ 23.73 4.945

PLUM0005-007 08/01/2005

Rates Fringes

Plumber

Apartment Buildings over 4

stories (except hotels).....\$ 19.86 7.56+a

ALL Other Work.....\$ 31.05 11.26+a

a. PAID HOLIDAYS: Labor Day, Veterans' Day, Thanksgiving Day

and the day after Thanksgiving, Christmas Day, New Year's

Day, Martin Luther King's Birthday, Memorial Day and the

Fourth of July.

PLUM0602-006 08/01/2005

Rates Fringes

Steamfitter, Refrigeration &

Air Conditioning Mechanic

(Including HVAC Pipe Work).....\$ 30.27 12.02+a

a. PAID HOLIDAYS:

New Year's Day, Martin Luther King's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and the day after Thanksgiving Day and Christmas Day.

* SFDC0669-001 04/01/2006

Rates Fringes

Sprinkler Fitter.....\$ 27.45 12.15

* SHEE0100-002 07/01/2005

Rates Fringes

Sheet Metal Worker (Including

HVAC Duct Work).....\$ 29.18 10.51

SUDC2000-001 04/12/2000

Rates Fringes

Laborer, Unskilled.....\$ 11.83 2.23

Pointer, caulker and cleaner

INCLUDES pointing,

caulking and cleaning of

existing masonry, brick,

stone and cement

structures (restoration

work); EXCLUDES pointing,

caulking and cleaning of

new or replacement

masonry, brick, stone and

cement.....\$ 20.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination

* a survey underlying a wage determination

* a Wage and Hour Division letter setting forth a position on a wage determination matter

* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:
Branch of Construction Wage Determinations

Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

BID BOND <i>(See instruction on reverse)</i>	DATE BOND EXECUTED <i>(Must not be later than bid opening date)</i>	OMB NO.:9000-0045
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Public reporting burden for this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (MVR), Federal Acquisition Policy Division, GSA, Washington, DC 20405.

PRINCIPAL <i>(Legal name and business address)</i>	TYPE OF ORGANIZATION <i>("X" one)</i>	
	<input type="checkbox"/> INDIVIDUAL	<input type="checkbox"/> PARTNERSHIP
	<input type="checkbox"/> JOINT VENTURE	<input type="checkbox"/> CORPORATION
		STATE OF INCORPORATION

SURETY(IES) *(Name and business address)*

PENAL SUM OF BOND					BID IDENTIFICATION	
PERCENT OF BID PRICE	AMOUNT NOT TO EXCEED				BID DATE FOR <i>(Construction, Supplies, or Services)</i>	INVITATION NO.
	MILLION(S)	THOUSAND(S)	HUNDRED(S)	CENTS		

OBLIGATION:

We, the Principal and Surety(ies) are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:

The Principal has submitted the bid identified above.

THEREFORE:

The above obligation is void if the Principal - (a) upon acceptance by the Government of the bid identified above, within the period specified therein for acceptance (sixty (60) days if no period is specified), executes the further contractual documents and gives the bond(s) required by the terms of the bid as accepted within the time specified (ten (10) days if no period is specified) after receipt of the forms by the principal; or (b) in the event of failure to execute such further contractual documents and give such bonds, pays the Government for any cost of procuring the work which exceeds the amount of the bid.

Each Surety executing this instrument agrees that its obligation is not impaired by any extension(s) of the time for acceptance of the bid that the Principal may grant to the Government. Notice to the surety(ies) of extension(s) are waived. However, waiver of the notice applies only to extensions aggregating not more than sixty (60) calendar days in addition to the period originally allowed for acceptance of the bid.

WITNESS:

The Principal and Surety(ies) executed this bid bond and affixed their seals on the above date.

PRINCIPAL					
SIGNATURE(S)	1.	2.	3.		
	<i>(Seal)</i>	<i>(Seal)</i>	<i>(Seal)</i>		
NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.	3.		
					<i>Corporate Seal</i>
INDIVIDUAL SURETY(IES)					
SIGNATURE(S)	1.	2.			
		<i>(Seal)</i>	<i>(Seal)</i>		
NAME(S) <i>(Typed)</i>	1.	2.			
CORPORATE SURETY(IES)					
SURETY A	NAME & ADDRESS			STATE OF INC.	LIABILITY LIMIT (\$)
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) <i>(Typed)</i>	1.	2.		
					<i>Corporate Seal</i>

AUTHORIZED FOR LOCAL REPRODUCTION
Previous edition is usable

STANDARD FORM 24 (REV. 10-98)
Prescribed by GSA - FAR (48 CFR) 53.228(a)

SURETY B	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT (\$)	Corporate Seal
	SIGNATURE(S)	1.	2.		
	NAME(S) & TITLE(S) (Typed)	1.	2.		

INSTRUCTIONS

1. This form is authorized for use when a bid guaranty is required. Any deviation from this form will require the written approval of the Administrator of General Services.
2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.
3. The bond may express penal sum as a percentage of the bid price. In these cases, the bond may state a maximum dollar limitation (e.g., 20% of the bid price but the amount not to exceed _____ dollars).
4. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of the sureties.
(b) Where individual sureties are involved, a completed Affidavit of Individual surety (Standard Form 28), for each individual surety, shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.
5. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seal"; and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.
6. Type the name and title of each person signing this bond in the space provided.
7. In its application to negotiated contracts, the terms "bid" and "bidder" shall include "proposal" and "offeror."

**** NOTICE ****

TO: ALL VENDORS/CONTRACTORS/CONSULTANTS

FROM: THE OFFICE OF THE ARCHITECT OF THE CAPITOL

Due to requirements set forth in the DEBT COLLECTION IMPROVEMENT ACT OF 1996 (PUBLIC LAW 104-134), all payments made to vendors, contractors and consultants doing business with the Federal Government must be made by Electronic Funds Transfer (EFT) directly to your financial institution. If you are currently enrolled under EFT with the Architect of the Capitol, no further action is necessary other than to report changes.

EFT payments are cost effective, enabling prompt, convenient and reliable payments directly to a designated bank account.

The Architect of the Capitol, in making EFT payments, supplies the financial institution with identifying information (ie. invoice number), which accompanies each transaction. The financial institution in turn can supply this information to the account holder.

Therefore, to accomplish the mandate of P. L. 104-134, it is necessary that the attached sheet; PAYMENT INFORMATION FORM ACH VENDOR PAYMENT SYSTEM be completed and returned with your bid or offer as set forth in Section G of the solicitation.

**PAYMENT INFORMATION FORM
ACH VENDOR PAYMENT SYSTEM**

This form is used for ACH payments with an addendum record that carries payment-related information. Recipients of these payments should bring this information to the attention of their financial institution when presenting this form for completion. The information will be transmitted in the CCD+ format to the designated financial institution.

Debt Collection Improvement Act of 1996

PAPERWORK REDUCTION ACT STATEMENT

The information being collected on this form is pursuant to Public Law 104-134, which mandated Electronic Funds Transfer for recipients of all federal payments (excluding IRS tax refunds) beginning July 24, 1996. This information will be needed by the Treasury Department to transmit payments and related data.

COMPANY INFORMATION

NAME:

ADDRESS:

CONTRACT NUMBER: **AOC-**_____

TAXPAYER IDENTIFICATION NUMBER (TIN):

CONTACT PERSON NAME:

TELEPHONE NUMBER: ()

FAX NUMBER: ()

AGENCY INFORMATION

NAME: ARCHITECT OF THE CAPITOL - FORD HOUSE OFFICE BUILDING

ADDRESS: ACCOUNTING DIVISION, ROOM H2-205

WASHINGTON, D.C. 20024

FAX NUMBER: (202) 225-7321

CONTACT PERSON NAME: MR. JAMES JARBOE

TELEPHONE NUMBER: (202) 226-2552

FINANCIAL INSTITUTION INFORMATION

BANK NAME:

BRANCH LOCATION: (If applicable)

CONTACT NAME:

TELEPHONE NUMBER: ()

NINE DIGIT ROUTING TRANSIT NUMBER: _ _ _ _ _

DEPOSITOR ACCOUNT NUMBER:

TYPE OF ACCOUNT: _ _ _ _ CHECKING _ _ _ _ SAVINGS _ _ _ _ LOCKBOX

SIGNATURE AND TITLE OF REPRESENTATIVE:

TELEPHONE NUMBER:



UNITED STATES CAPITOL POLICE
WASHINGTON, D.C. 20510-7218

CP-491
(4-04)

REQUEST FOR CHECK OF CRIMINAL HISTORY RECORDS

Please report with: (1) A valid form of photo identification, (2) and this form to the Fairchild Building located at 499 South Capitol Street SW Washington, D.C., Room 127 between the hours of 7am until 3pm Monday through Friday for processing.

1. *Name:* (Last, First, Middle) _____ *Address:*
Street & No. _____
City & State: _____
Zip: _____ Tele: _____

2. *Other Names Ever Used:* (e.g. maiden name, nickname, ect. *If you have never used another name write "None".*) _____

3. *Date of Birth:* (Month, Day, Year) _____ 4. *Birthplace:* (City and State or Country) _____

5. *Social Security Number:* _____ 6. *Gender:*
Male Female

7. *Race:* _____ 8. *Height:* _____ 9. *Weight:* _____ 10. *Eye Color:* _____ 11. *Hair Color:* _____

SIGNATURE AND RELEASE OF INFORMATION:

READ THE FOLLOWING CAREFULLY BEFORE YOU SIGN:

- I understand that the information provided above will be used to check the criminal history records of the Federal Bureau of Investigation (FBI).
- I consent to the use of the information provided in making a security determination concerning me.
- I certify that, to the best of my knowledge and belief, all of the information provided above is true, correct, and complete, made in good faith.

12. *Signature:* _____ 13. *Date:* _____